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BENEFICIARY LIABILITY UNDER MEDICARE: ANALYSIS OF PHYSICIAN PARTICIPATION, ASSIGNMENT, AND BILLING PRACTICES

Final Report

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EXECUTIVE SUMMARY

Beneficiary liability at point-of-service is directly related to the level of balance bills for physician charges that exceed Medicare's allowed charge as well as a physician's propensity to collect the Medicare copayment (that is, the deductible and 20 percent coinsurance). Policymakers have faced an ongoing tension regarding the appropriate level of beneficiary out-of-pocket liability. Whereas copayments may deter overutilization of services, policymakers are concerned that substantial balance billing could result in underutilization of services and hence, create access problems for certain segments of the Medicare population. This report examines physicians' billing practices under Medicare for the deductible, coinsurance, and balance bill (that is, the difference between the physician's actual charge and Medicare's allowed charge).

This study is based on the 1988 Physicians' Practice Costs and Income Survey (PPCIS), a national survey of physicians sponsored by the Health Care Financing Administration. A total of 3,505 physicians participated with a response rate of 61 percent.

According to the 1988 PPCIS, about half of all physicians signed the Medicare Participation Agreement in April 1988 (49.5 percent). Participation rates ranged from 30.5 percent for anesthesiologists to 75 percent for cardiovascular/thoracic surgeons. Participation rates rose as Medicare dependence rose. Nonparticipating physicians accepted about one-in-three cases on assignment, on average. In fact, 8 percent of nonparticipants were actually "de facto" participants in that they accepted 100 percent of their cases on assignment.

Participation rates increased sharply between January 1987 and April 1988 -- from about one-third to nearly one-half -- demonstrating a large, one-time increase. Among the policy levers that might have influenced physicians to sign in April 1988 were a more favorable increase in the prevailing charges for participating physicians and limits on non-participants' actual charges for overpriced procedures.

This study also examined physicians' billing practices for the deductible and coinsurance among assigned patients. When patients were covered by private supplemental insurance or Medicaid, physicians almost always billed the supplemental insurer or Medicaid for the copayments, rather than the patient. Only 8 percent of physicians never billed the insurer, instead preferring to bill the patient directly.

Physicians were asked whether they billed patients for the deductible and coinsurance when they were not covered by a supplemental insurance policy or Medicaid. Seventy percent of physicians always billed for the copayments, while 20 percent sometimes billed, and the remaining 10 percent never did so. The results suggest that not all physicians bill patients for the $75 deductible and the 20 percent copayment. If some physicians routinely waive the deductible and coinsurance for patients accepted on assignment, then the Medicare program is not benefitting from one form of volume (demand) control. And as assignment rates steadily increase, the deductible and coinsurance become the most important vehicles for preserving some degree of price sensitivity among Medicare beneficiaries.

BENEFICIARY LIABILITY UNDER MEDICARE: ANALYSIS OF PHYSICIAN PARTICIPATION, ASSIGNMENT, AND BILLING PRACTICES

1.0 INTRODUCTION

The Medicare program was enacted in 1965 to increase access to care among the elderly in this country. Cost-sharing mechanisms were also introduced to maintain price sensitivity among beneficiaries. In theory, requiring beneficiaries to share some of the cost of care would discourage overutilization, and at the same time, better inform users of the cost of services. Since 1982, users must pay an annual $75 deductible,* either out-of-pocket or through a supplemental insurance policy (also known as Medigap coverage). In addition, once the deductible has been satisfied, patients must pay a 20 percent coinsurance, again, either out-of-pocket or through a supplemental insurance policy. The Medicare program mandates that physicians collect both the deductible and coinsurance from the beneficiary, even when the case is accepted on assignment.** In other words, when the physician agrees to accept Medicare's payment as payment in full, the physician must still bill the patient (or supplemental insurer) for the deductible and 20 percent coinsurance.

A third source of beneficiary out-of-pocket liability, known as balance billing, can also act as a demand constraint. When the Medicare program was introduced in 1965, physicians were permitted to bill patients for the difference between Medicare's allowed charge and the physician's submitted charge as an inducement to treat Medicare patients. Although physicians were encouraged to voluntarily accept Medicare's payment as payment in full for low-income patients, physicians may not base their assignment decisions on the income status of their patients. A recent survey of Medicare beneficiaries

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*Under the Omnibus Budget Reconciliation Act of 1990, the deductible was raised to $100.

**However, HCFA is unable to cite the legislative or regulatory authority mandating collection of the coinsurance.

found no clear relationship between beneficiary income status and the physician's assignment decision (Nelson et al., 1989). Research has shown that the more important determinant of a physician's assignment decision is the generosity of the Medicare fee relative to the usual fee or the private (Blue Shield) fee (Mitchell and Cromwell, 1982).

Policymakers have faced an ongoing tension regarding the "appropriate" level of beneficiary out-of-pocket liability. Whereas coinsurance has been imposed to deter overutilization of services, policymakers are concerned that substantial balance billing could result in underutilization of services and hence, create access problems for certain segments of the Medicare population.

Congress has imposed a number of restrictions on physicians' ability to bill patients for the difference between their submitted charge and Medicare's allowed charge. When Congress froze physician fees in October 1984, the Medicare Participation Program was introduced simultaneously, to prevent physicians from passing the freeze onto Medicare beneficiaries in the form of higher balance bills. Physicians were given an opportunity to sign a Participating Physician Agreement (PPA) which required them to accept all Medicare services on assignment and allowed no balance billing. In exchange, participating physicians were promised higher updates of their allowed charges when the freeze was lifted and were allowed to raise their actual charges during the fee freeze. Nonparticipating physicians could continue to decide, on a case-by-case basis, whether or not to accept assignment. However, both their actual and allowed charges were frozen.

The freeze on nonparticipants' actual charges was eliminated under the Omnibus Budget Reconciliation Act of 1986. In place of the fee freeze, Congress introduced the Maximum Allowable Actual Charge (MAAC), which limited the amount nonparticipants could raise their fees on overpriced procedures. If the physician's actual charge for a given procedure was greater than 115 percent of the national average prevailing charge (that is, the MAAC), the charge could be raised by only one percent. Those with fees less than 115 percent of the national average could raise their fees by up to

25 percent, but not exceeding the MAAC. OBRA-86 also reinforced the payment differential between participating and nonparticipating physicians by establishing a 4 percent differential in the prevailing charges, favoring participating physicians.

Under the Omnibus Budget Reconciliation Act of 1987, Congress once again curtailed physicians' ability to balance bill patients. Nonparticipating physicians' actual charges were limited to 125 percent of the reduced prevailing charges for participating physicians. OBRA-89 imposed further reductions in procedures that were overvalued relative to a simulation of the resource-based relative value scale (RBRVS).

When the RBRVS is phased in beginning in 1992, additional limits on balance billing will go into effect, once again to prevent physicians from making up for fee reductions by billing the patient. First, under OBRA-89, the MAAC limits were extended to 1991 and 1992, with a cap of 125 percent of the Medicare payment in 1991 and 120 percent in 1992. Beginning in 1993, no charge can exceed 115 percent of the Medicare fee. OBRA-90 allowed a temporary, one-year increase during 1991 for evaluation and management services, with the MAAC limits raised to 140 percent.

What are the trends in beneficiary liability under Part B of Medicare? As shown in Table 1-1, per-enrollee out-of-pocket expenses rose from $301 in 1983 to $358 in 1988, a 19 percent increase. This increase was entirely a result of higher coinsurance payments during that period. The average deductible payment showed no change, while the average coinsurance amount increased 56 percent. The potential balance bill dropped by one-third due to increases in the participation rate as well as higher assignment rates among nonparticipating physicians. Most of the reduction in balance bills occurred between 1987 and 1988.

Clearly, the participation program and the MAAC limits have been successful at limiting the level of balance billing for Part B services. Congress has begun to focus its attention on physician billing practices for the copayments for assigned patients. If physicians routinely waive the deductible and coinsurance for patients accepted on assignment, then the Medicare program is not benefitting from one form of volume (demand) control.

TABLE 1-1

BENEFICIARY LIABILITY UNDER MEDICARE PART B: 1983-1988 (Dollars Per Enrollee)

Calendar Year	Total	Deductible	Coinsurance	Potential Balance Billing
1983	$301	59	155	87
1984	316	60	164	92
1985	325	62	177	87
1986	340	56	196	88
1987	355	58	227	71
1988	358	59	242	57
Percent Change 1983-1988	18.9%	0.0%	56.1%	-34.5%

Source: Health Care Financing Administration, Medicare Program Data Compendium, 1988.

And as assignment rates steadily increase, the deductible and coinsurance become the most important vehicles for preserving some degree of price sensitivity among Medicare beneficiaries. Medicare carriers recently have stepped up their efforts to identify and occasionally prosecute physicians that routinely fail to bill for the beneficiary's share. In some cases, fraudulent physicians were identified by their advertisements stating that they will waive copayments (Norman, 1989).

Other than anecdotal evidence, little is known about the extent to which physicians routinely collect the deductible and coinsurance. As a result, the Omnibus Budget Reconciliation Act of 1987 directed the Secretary of Health and Human Services to conduct a study that would "determine the distribution of collection rates [for deductibles and coinsurance] among various classes of physicians." This report presents the results of such a study. Two facets of beneficiary out-of-pocket liability are discussed from the perspective of physician practice patterns: their participation and assignment practices and their billing patterns for the deductible and coinsurance.

Chapter 2.0 describes the methods used for analysis, including a description of the 1988 PPCIS and the data preparation steps taken prior to analysis. Chapter 3.0 analyzes trends in participation rates from 1984 through 1989 and describes variations in 1988 participation rates according to specialty, size of Medicare caseload, and geographic location, among other characteristics. In addition, participation rates from the 1988 PPCIS are compared to those from other sources. Chapter 4.0 describes surveyed physicians' billing patterns for the deductible and coinsurance for patients with supplemental insurance and those with no Medigap coverage. Billing practices are examined according to selected physician characteristics, such as specialty, employment arrangement, practice size, and board certification status.

2.0 METHODS

2.1 Data Source

The data source for this analysis is the 1988 Physicians' Practice Costs and Income Survey (PPCIS). The 1988 PPCIS was sponsored by the Health Care Financing Administration and was fielded from mid-1989 to early 1990. The survey addresses several important areas of policy concern, with particular emphasis on physician practice costs, physician productivity and incomes, Medicare participation, and malpractice insurance coverage.

The American Medical Association's Physician Masterfile, a comprehensive file of all physicians practicing in the U.S., was used as the sampling frame. A nationally-representative sample, stratified by specialty, census division, and urban/rural location, was randomly selected from the Masterfile. Physicians from rural areas were oversampled, as were gastroenterologists, orthopedic surgeons, cardiologists, urologists, thoracic surgeons, and "other" surgical specialists. General and family practitioners, internists, and other medical specialists were undersampled.

To be eligible for the survey, physicians had to meet the following criteria:

(1) currently provide patient care services for at least 20 hours per week;

(2) <u>not</u> currently a resident, clinical fellow or research fellow;

(3) main practice cannot be a faculty practice plan, hospital, clinic or HMO, or by a federal government agency in 1988;

(4) if in a multi-practice arrangement, greater than 80 percent of income from the practice in which the physician was full or part owner, or employed by another physician or group of physicians;

(5) have spent at least twenty hours per week in patient care (or services) during 1988; and

(6) have been in the same private practice for all of 1988.

A total of 9,360 cases were fielded, and of these eligibility was determined for 8,348 cases. It was not possible to determine eligibility for cases that were unlocatable or that refused the screening section of the questionnaire. Of those cases where eligibility could be determined, 5,333 were deemed eligible and 3,015 were ineligible, with an eligibility rate of 64 percent. The most common reason for ineligibility was physicians reporting their main practice as a faculty practice plan or employed by a hospital, clinic, or HMO (Thalji, et al., 1990). The final number of completed cases was 3,505, achieving an overall response rate of 61 percent. A completed case was defined as having had attempted each section of the questionnaire with the exception of the demographic section.

The 1988 PPCIS has several advantages over other data sources. First, for an analysis of Medicare participation rates, the PPCIS gathered physician-level data on whether or not the physician signed the participation agreement. Medicare carrier data on participation relate to the provider ID, which may include multiple physicians or a single physician. Information is not available from the Medicare carriers to determine the actual proportion of physicians who signed the agreement. Moreover, physicians may practice in more than one group and groups may have more than one provider ID, further complicating the task of counting the number of participating physicians using carrier data. Thus, the PPCIS data are better-suited for providing data on raw participation rates. In addition, the PPCIS permits analysis of Medicare participation rates according to a variety of physician characteristics, such as size of Medicare caseload, race/ethnicity, board certification status, and foreign medical graduate status. The various PPCIS surveys provide information on Medicare participation for six sign-up periods, from October 1984 through January 1989.

With regard to an analysis of billing patterns, the 1988 PPCIS is the only known source that asked physicians how often they bill assigned patients for the deductible and copayment. The 1988 Physician Payment Review Commission's (PPRC) Survey of Physicians asked physicians, "From what percentage of your non-Medicaid patients do you normally collect the

coinsurance amount?" In addition to the lack of comparability, the PPRC reported an item non-response rate of 25.0 percent for that question (Berk et al., 1990).

2.2 Overview of Questionnaire

2.2.1 Medicare Section

The analysis presented in this report is based primarily on the Medicare section of the 1988 PPCIS. Appendix A displays the Medicare section of the survey instrument. The first part (Q38A - Q38F) asked the respondent (either the physician or a proxy, such as an office manager) to disaggregate medical practice revenues according to primary payor source. Five revenue-source categories were specified: Uninsured, Medicare Part B, Medicaid, Blue Shield, and Other Private. In addition, an "other" category was provided to account for the universe of revenue sources.

Question 38B served as a screener for the remainder of the Medicare section; if the respondent reported receiving at least one percent of practice revenues from Medicare (or if the percent was unknown), the remainder of the Medicare section was attempted. Physicians reporting that none of their revenues came from Medicare Part B were skipped out of the remainder of the Medicare section.

The next part of the Medicare section (Q38G and Q38H) asked the percentage of Medicare patients that also have supplemental insurance covering the deductible and copayment (e.g., "Medigap" coverage) and the percentage that are jointly covered by Medicare and Medicaid ("crossover eligibles").

The third part asked about Medicare participation. Physicians were asked whether they signed the Participating Physicians' Agreement (to accept all patients on assignment) for the two sign-up periods beginning April 1988 and January 1989 (Q39 and Q40). Non-participants (those that did not sign for the period beginning April 1988) were asked what percentage of their Medicare patients they accepted on assignment in 1988 (Q40B) and what percentage of the full charge they collected from non-assigned patients (Q40C).

The final component of the Medicare section pertained to physicians' billing practices for the deductible and coinsurance. Physicians not accepting any patients on assignment were not asked questions on their billing practices. Of the 3,505 physicians in the sample, 2,977 physicians accepted at least some of their Medicare patients on assignment (Q39 = 1 or Q40B > 0). The questionnaire differentiated physicians' billing patterns for patients with and without supplemental insurance or Medicaid because we expect billing practices to differ when patients have Medigap coverage. For example, where the patient has supplemental insurance, physicians may routinely bill the supplemental insurance company rather than the patient to achieve a higher collection rate. Physicians are required to bill Medicaid directly rather than the patient.

Questions 41A and 41B pertained to the subset of assigned Medicare patients with supplemental insurance. Physicians were asked the percentage of cases in which they bill the insurer or Medicaid versus the patient directly. Since these questions account for the entire set of billing possibilities for the specified subgroup of patients, percentages were expected to sum to 100.

Questions 41C and 41D concerned assigned patients without any supplemental insurance. Physicians were asked in what percentage of cases they bill the patient for the deductible and copayment. The responses ranged from 0 to 100 percent.

Finally, Question 42 asked physicians the percentage of the deductible and coinsurance they collect on average for all patients accepted on assignment.

2.2.2 Other Data Used in This Analysis

Several additional data sources were used in this analysis. First, the American Medical Association's Physician Masterfile provided data on each physician's age, sex, board certification status, medical school, geographic region, urban/rural classification, and zip code. The zip code provided by

the AMA was updated during the survey. By crosswalking updated zip codes to state and county codes, the AMA's geographic data (region, urban/rural location) were updated.

A screener question asked physicians to verify the specialty designation on the AMA file. Discrepancies between the AMA file and the physician's self-reported specialty were recorded. For the purpose of this analysis, the physicians' self-reported specialty is collapsed into 16 specialty categories (see Appendix B).

Questions from other sections within the 1988 PPCIS provide additional data on practice size and employment arrangement. Questions 5A--5G ascertain the employment arrangement, including full or part owner of their main medical practice (Q5A) or employed by another physician or group of physicians (Q5B). Physicians in all other arrangements were ineligible.

Practice size was based on the number of full-time (at least 20 hours per week) and part-time (less than 20 hours per week) physicians formally associated with their practice (Q12A and Q12C, respectively). Practice size is calculated by summing the number of full-time physicians and a fraction of the number of part-time physicians (Q12C/3).

2.3 Data Preparation

Several data preparation steps were taken to correct for inconsistencies in the data, due either to interviewer error, respondent error, or inadvertently omitted skip patterns.

Before analyzing the significance of Medicare Part B revenues across specialties, reconciliation was performed on the payor mix data (Q38A-F). Since the six payor categories account for the entire range of possibilities for medical practice revenue sources, the reported percentages should sum to 100. However, 4 percent of the cases did not sum to an acceptable range (between 98 and 102 percent). Allowing the data to remain in this condition would distort the means and distributions on caseload variables necessary for

this analysis. Therefore, cases with complete data (no missing values) that did not sum within the range of 98 - 102 percent were prorated to 100 percent.

The data on physicians' billing practices required preparation in three areas: to reconcile logical inconsistencies, to eliminate ambiguous responses, and to enforce two skip patterns omitted from the questionnaire. First, Q41A and Q41B were expected to sum to 100 percent, reflecting the two billing options available to physicians for patients with supplemental insurance -- physicians could either bill the insurer or bill the patient directly. When a physician reported that a bill was always sent to both the insurer and the patient (in other words, Q41A = 100 and Q41B = 100), the response was edited to reflect that the insurer was the primary recipient of the bill. (This occurred in 10 cases.) When the data reported in Q41A and Q41B summed to less than 100 percent (60 cases), a residual category was created to reflect that neither the patient nor the supplemental insurer were billed for the deductible and copayment. Where Q41A plus Q41B equalled 100 percent, the residual was automatically set equal to zero.

A review of verbatim comments indicated that, for many physicians, the billing pattern varied according to they type of third-party insurer, especially for private insurers versus Medicaid. Whereas a bill is usually sent to private insurers, many physicians do not bother billing Medicaid for the deductible and coinsurance. In such cases, the billing process for privately-insured patients was reflected in the data because private patients outnumbered joint Medicare-Medicaid patients. Another factor affecting physicians' billing patterns included whether the patient was treated in an inpatient or outpatient setting (in most cases, the patient would be billed directly for outpatient services while supplemental insurers would be billed directly for inpatient services). In the few cases with this type of problem, the pattern for inpatient services was reflected, because it was assumed to account for higher proportion of Medicare charges.

A potential inconsistency occurred when physicians reported that they always billed patients for the deductible and never for the coinsurance (Q41C = 100 and Q41D = 0) and vice versa (Q41C = 0 and Q41D = 100). All such cases

were reviewed to determine whether verbatim comments could be used to validate the data. In some cases, the data were edited to correct data entry errors, while in other cases, the verbatim comments suggested that physicians do indeed maintain different billing practices for the two types of copayment. For example, a few physicians (mostly surgeons) reported that they never bill for the deductible because most patients have already paid the deductible by the time they are referred.

The questionnaire inadvertently omitted a skip pattern related to the presence/absence of Medicare patients with supplemental insurance or Medicaid coverage. The questionnaire should have skipped physicians with no Medigap or joint Medicaid eligibles (Q38G = 0 and Q38H = 0) out of the set of questions dealing with billing patterns for patients with supplemental insurance (Q41A and Q41B). Likewise, physicians with no "uninsured" Medicare patients should have been skipped out of the two questions on billing patterns for patients without supplemental insurance (Q41C and Q41D). These skip patterns have been imposed *ex post*.

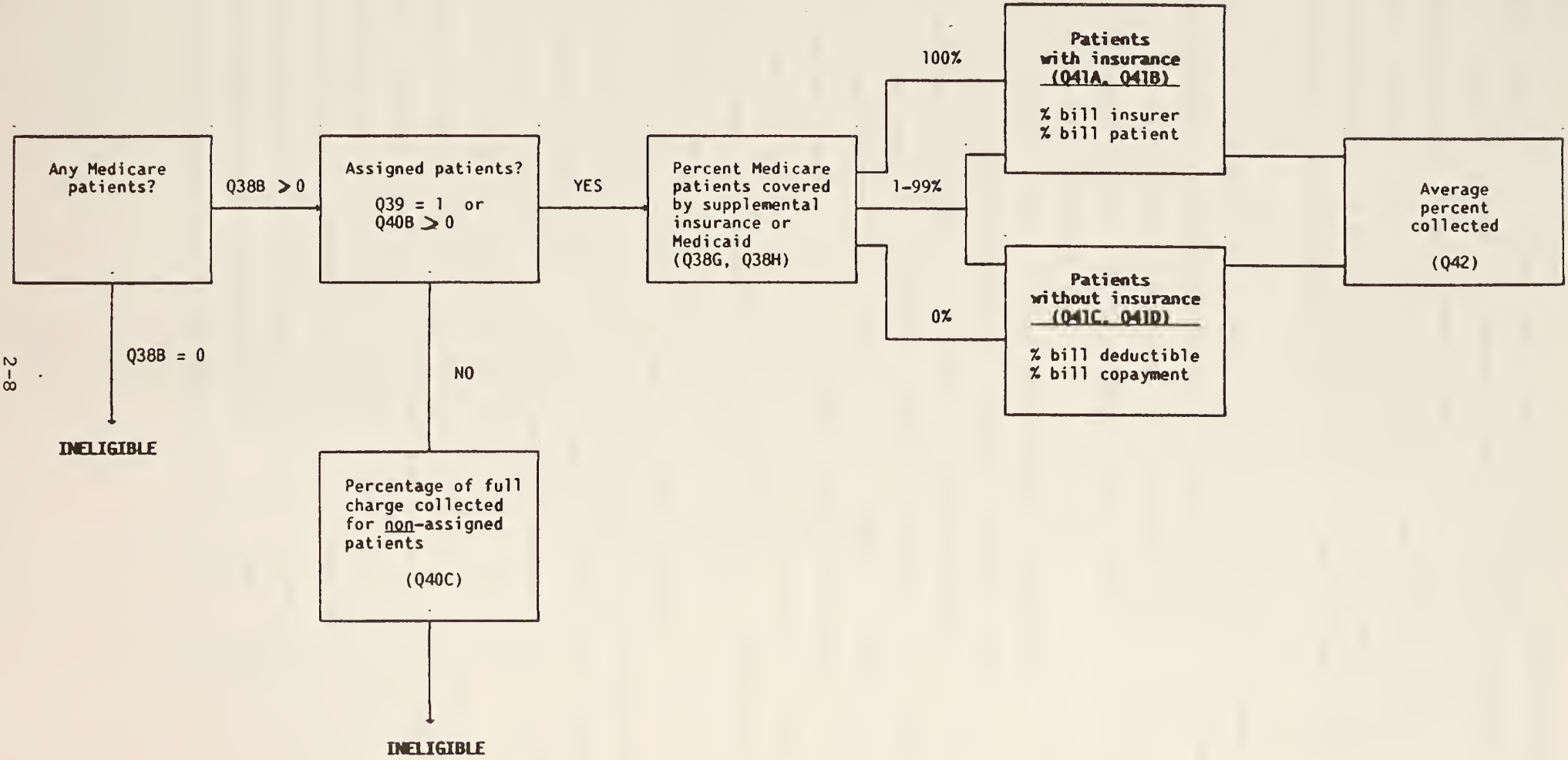
Exhibit 2-1 depicts the skip patterns employed in this analysis. Only 20 cases out of 3,076 (0.7 percent) were skipped out of Q41A/B *ex post* because they had no Medicare patients with supplemental insurance. Another 216 cases (7.0 percent) were skipped out of Q41C/D *ex post* because all patients had supplemental coverage.

2.4 Analysis of Item Non-response Rates

This section presents item non-response rates for selected questions in the Medicare section. Item non-response rates indicate the relative difficulty or sensitivity of the questions. Item non-response rates are calculated as follows: the numerator represents the sum of the missing, don't know, refused, not applicable, combined, and uncodeable responses; the denominator includes the total number of responses (3,505) minus the legitimate skips. Thus, the item non-response rate represents the percent of eligible respondents (excluding the legitimate skips) that were unable or unwilling to respond to the question with a valid *numeric* response.

EXHIBIT 2-1

SKIP PATTERNS FOR THE QUESTIONS ON MEDICARE BILLING PRACTICES



Item non-response rates ranged from a low of 0.9 percent on Q39 and Q40 to a high of 13.7 percent on Q38G. In general, item non-response rates for the revenue-source questions were extremely low. Only 4 percent of the physicians either responded "don't know" or refused to answer all of the revenue-source questions. The Medicare Part B revenue source question had only a slightly higher item non-response rate of 5.0 percent (refer to Table 2-1).

Questions 38G and 38H proved to be slightly more difficult to answer. The non-response rates for Q38G and Q38H were 13.7 percent and 11.1 percent, respectively. It is likely that physicians who do not typically involve themselves in the day-to-day billing of patients would presumably find these questions more difficult to answer.

Physicians had very little difficulty answering the questions regarding participation. The overall response rate on each of the participation questions was extremely high, with fewer than one percent missing. Most of these missing values were a "don't know" response. Question 40B was asked of non-participating physicians: only 6.4 percent were unable or unwilling to report their 1988 assignment rate. Non-response rates were between 4.9 and 5.7 percent for the billing pattern questions. Finally, question 42, which asks the average percent of deductible and coinsurance physicians collect, had a higher non-response rate of 10.3 percent.

Table 2-1 also compares item non-response rates according to the physician's employment status. The 1988 PPCIS asked physician employees, as well as self-employed physicians, about their Medicare participation status and billing practices. In the 1983 PPCIS, physician employees were skipped out of the Medicare section because they were believed to be less knowledgeable about participation and billing practices of their group.

Table 2-1 displays selected item non-response rates from the 1988 PPCIS for physician employees and self-employed physicians. Despite low item non-response rates overall, differential non-response rates were observed for employed versus self-employed physicians, with physician employees accounting for a disproportionate share of missing values. The largest difference was observed at Q38H, the percentage of Medicare patients also covered by

TABLE 2-1

COMPARISON OF ITEM NON-RESPONSE RATES: SELF-EMPLOYED VERSUS EMPLOYED PHYSICIANS

QUESTION	ALL PHYSICIANS			SELF-EMPLOYED			EMPLOYED			
	Valid N	NRR*		Valid N	NRR*		Valid N	NRR*		t-value**
38B	3,505	5.0%	(0.0037)	3,086	4.6%	(0.0038)	419	12.2%	(0.0160)	4.63
38G	3,250	13.7	(0.0060)	2,870	13.3	(0.0063)	380	22.1	(0.0213)	3.96
38H	3,250	11.1	(0.0055)	2,870	10.0	(0.0056)	380	21.1	(0.0209)	5.12
39	3,250	0.9	(0.0017)	2,870	0.5	(0.0013)	380	2.2	(0.0075)	2.23
40	3,250	0.9	(0.0017)	2,870	0.6	(0.0014)	380	2.4	(0.0079)	2.26
40B	1,631	6.4	(0.0061)	1,459	5.3	(0.0059)	172	14.1	(0.0265)	3.24
41A	2,471	4.9	(0.0043)	2,182	4.3	(0.0043)	289	8.4	(0.0163)	2.43
41B	2,471	5.3	(0.0045)	2,182	4.4	(0.0044)	289	8.4	(0.0163)	2.37
41C	2,622	4.9	(0.0042)	2,340	3.9	(0.0040)	282	7.7	(0.0159)	2.32
41D	2,622	5.7	(0.0045)	2,340	4.7	(0.0044)	282	8.0	(0.0162)	1.97
42	3,076	10.3	(0.0055)	2,720	8.5	(0.0053)	356	14.0	(0.0184)	2.87

$$*NRR = \frac{\text{Number of "missing values" excluding valid skips}}{\text{Valid N}} * 100$$

Where NRR = Nonresponse rate; Number of "missing values" = sum of don't know, missing refused, combined, not applicable, and uncodeable responses; and Valid N = the number of physicians who were asked the question. Valid N excludes physicians who were legitimately skipped out of the question.

**Differences between NRR for self-employed versus NRR for employed physicians are significant at the 0.05 level or better for all of the questions.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

Medicaid. Ten percent of self-employed physicians versus 21 percent of the physician employees did not respond. These differences persisted for the remaining questions, although the differences were not quite as pronounced.

Despite slightly higher item non-response rates for employed physicians, this analysis includes both employed and self-employed physicians. Key analyses differentiate between employed and self-employed physicians (e.g., participation rates, billing patterns). We have opted to include physician employees for two reasons: (1) the inclusion of employed physicians in the sample makes the results more generalizable to the population of physicians; and (2) the item non-response rates were generally low for the Medicare section, regardless of employment status.

2.5 Sample Sizes

Sample sizes for individual questions are a function of the questionnaire skip patterns as well as the level of nonresponse. Table 2-2 shows the number of cases that responded to selected questions. Cell sizes by physician characteristics (specialty, age, sex, etc.) are also provided. This table offers the reader a sense of the number of observations available for analysis of physician subpopulations.

2.6 Statistical Methods

This analysis uses sampling weights to adjust for (1) over- and undersampling of selected groups of physicians; and (2) differential non-response rates between subgroups. Statistical tests have been performed to determine the significance of differences observed in the sample ($p < 0.05$). T-tests were performed for continuous variables and chi-square tests for categorical variables. Standard errors are presented for most means and percentages.

TABLE 2-2

SAMPLE SIZES FOR 1988 PPCIS

	PHYSICIAN SAMPLE	MEDICARE REVENUES (Q38B)	PRIVATE SUPPLEMENTAL INSURANCE* (Q38G)	APRIL 1988 PARTIC. RATES* (Q39)	PERCENT BILLING INSURER DIRECTLY (Q41A)	PERCENT BILLING PATIENT FOR COINSURANCE (Q41D)
OVERALL	3,505	3,328	2,800	3,222	2,468	2,521
Specialty						
General/Family Practice	432	406	363	417	310	300
Internal Medicine	374	359	328	367	302	301
Cardiology	142	139	131	141	120	124
Gastroenterology	145	139	127	141	119	120
Other Medical Specialty	292	277	146	169	128	136
General Surgery	221	210	199	220	178	175
Cardiovascular/ Thoracic Surgery	161	155	147	158	138	139
Obstetrics/ Gynecolology	271	264	210	239	149	170
Opthalmology	171	163	151	169	135	141
Orthopedic Surgery	149	145	131	147	125	116
Urology	182	179	171	181	143	152
Other Surgical Specialty	178	172	155	171	124	138
Psychiatry	207	195	131	148	80	98
Anesthesiology	216	199	175	209	161	155
Radiology	171	164	114	168	131	130
Other Specialties	193	162	170	177	125	126
Region						
Northeast	727	697	586	660	488	539
North Central	779	737	629	728	567	549
South	1,236	1,175	1,001	1,134	882	890
West	763	719	584	700	531	543
Urban/Rural						
Rural	845	807	701	810	650	609
Urban	2,660	2,521	2,099	2,412	1,818	1,912
Age						
34 and under	386	367	295	352	267	272
35 - 39	696	666	569	645	514	513
40 - 49	1,168	1,105	932	1,073	836	834
50 - 59	771	735	620	711	548	566
60 - 64	274	259	220	274	177	192
65 and over	210	196	164	210	126	144

TABLE 2-2 (continued)

SAMPLE SIZES FOR 1988 PPCIS

	PHYSICIAN SAMPLE	MEDICARE REVENUES (Q38B)	PRIVATE SUPPLEMENTAL INSURANCE* (Q38G)	APRIL 1988 PARTIC. RATES* (Q39)	PERCENT BILLING INSURER DIRECTLY (Q41A)	PERCENT BILLING PATIENT FOR COINSURANCE (Q41D)
Sex						
Male	3,248	3,086	2,631	3,013	2,309	2,367
Female	257	242	169	209	159	154
Medical School						
Domestic	3,209	3,046	2,551	2,948	2,248	2,302
Foreign	296	296	249	274	220	219
Board Certification						
No	863	810	701	793	588	596
Yes	2,642	2,518	2,099	2,429	1,880	1,925
Employment Status						
Self-Employed	3,086	2,953	2,499	2,852	2,179	2,252
Employed	419	375	301	370	289	269
Practice Size						
Group	1,839	1,742	1,447	1,712	1,353	1,353
Solo	1,666	1,586	1,353	1,666	1,115	1,168
Medicare Caseload						
Missing	177	177	45	136	64	63
None (0.%)	229	229	-	-	-	-
Low (1-15%)	621	621	543	617	396	445
Medium (16-50%)	1,838	1,838	1,610	1,831	1,493	1,481
High (Over 50%)	640	640	602	638	515	532
Medicaid Caseload						
Missing	218	50	50	160	NA	NA
None (0%)	531	529	390	440	NA	NA
Low (1-10%)	2,000	1,996	1,749	1,936	NA	NA
High (Over 10%)	756	753	611	686	NA	NA

Definitions of skip patterns:

*Physicians with no Medicare patients were legitimately skipped.

**Physicians with no Medicare patients, no assigned patients, and no assigned patients with supplemental insurance were legitimately skipped.

***Physicians with no Medicare patients, no assigned patients, and no assigned patients without supplemental insurance were legitimately skipped.

Source: 1988 Physicians' Practice Costs and Income Survey.

3.0 ANALYSIS OF MEDICARE PARTICIPATION AND ASSIGNMENT RATES

3.1 Introduction

Previous research on physician participation in the Medicare program found that participation rates were relatively constant over the first four sign-up periods, with about 35 to 40 percent signing the agreement between October 1984 and January 1987 (Rosenbach et al., 1988). Only minor fluctuations were observed from year to year, in spite of the incentives designed to encourage participation. With the initial participation decision in October 1984, the major incentive was an update in the charge profile for participants, but not for non-participants, at the end of the fee freeze. Congress extended the participation program and the fee freeze, instituting a second sign-up period for the fiscal year beginning October 1, 1985. When the freeze on prevailing charges for participating physicians was lifted, a third participation decision was made as of May 1, 1986.

The Omnibus Budget Reconciliation Act of 1986 (OBRA-1986) offered physicians a complex array of new incentives effective with the January 1987 participation decision. First, the update in the prevailing charge levels for non-participants was only 96 percent of the prevailing charge for participants. Second, the actual charge levels of non-participants were limited, thus limiting their balance billing authority.* Third, non-participating physicians were required to notify beneficiaries of their potential out-of-pocket liability for elective surgical procedures of $500 or more, including estimates of the actual charge, the approved charge, the balance bill, and the coinsurance amount.

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*Known as the maximum allowable actual charge (MAAC), charge limits are calculated for each service or procedure the physician performs based on a formula that compares the lower of (1) the physician's 1984 base-period charge or (2) the 1986 average actual charge, to the 1987 prevailing charge for non-participating physicians.

Under OBRA-1987, the January 1987 agreement was extended through March 1988, when the fifth sign-up period went into effect for April 1988. Congress stiffened the limits on balance billing, reducing non-participating physicians' actual charges on 12 overpriced procedures to 125 percent of the prevailing charge, including the overpriced procedure rollbacks. In addition, the prevailing charge updates for non-participants were 95.5 of those for participants, with a 95 percent increase promised in January 1989.

This chapter evaluates trends in physician participation rates over the six sign-up periods and compares data from the 1988 PPCIS to other data sources. In addition, participation rates are presented according to selected physician characteristics. Finally, the characteristics of a select group of non-participants, those who accept assignment on all of their cases (the de facto participants), are described.

3.2 Physician Dependence on Medicare

How physicians react to Medicare regulations and incentives may be dependent on several factors. In particular, physicians' dependence on Medicare Part B may be a significant determinant of their behavioral response. For example, previous research has found that participation decisions are strongly associated with Medicare dependence (Mitchell and Rosenbach, 1988). With respect to billing practices for the deductible and coinsurance, physicians that rely on Medicare Part B for more than half of their practice revenues would likely be more concerned with the collection of deductibles and copayments, since many of these relatively small per-patient amounts would sum to a substantial proportion of total revenues. Furthermore, physicians that are heavily dependent on Medicare patients are probably more likely to have explicit guidelines and policies regarding the billing of Medicare patients.

In 1988, physicians relied on Medicare Part B for an average of 30.4 percent of their total revenues (Table 3-1). There was considerable variation between specialties, however, ranging from 53.3 percent for

TABLE 3-1

MEDICARE DEPENDENCE BY SPECIALTY, 1988

Specialty	Mean Percent of Revenues from Medicare Part B		Total	PERCENT OF REVENUES FROM MEDICARE: None		1-15%		16-50%		Over 50%	
All SPECIALTIES	***30.4%***	***(0.4)***	***100.0%***	***9.2%***	***(0.4)***	***20.3%***	***(0.6)***	***54.5%***	***(0.8)***	***16.0%***	***(0.7)***
General/Family Practice	29.4	(0.9)	100.0	2.6	(0.8)	23.8	(2.1)	62.3	(2.3)	11.3	(1.5)
Internal Medicine	44.0	(1.1)	100.0	0.3	(0.3)	9.1	(1.5)	59.6	(2.5)	31.0	(2.4)
Cardiology	53.3	(1.6)	100.0	0.7	(0.7)	1.8	(1.1)	47.0	(4.2)	50.5	(4.2)
Gastroenterology	42.8	(1.3)	100.0	0.6	(0.6)	1.8	(1.1)	76.1	(3.5)	21.5	(3.4)
Other Medical Specialties	20.5	(1.4)	100.0	42.1	(2.9)	10.4	(1.8)	37.1	(2.8)	10.5	(1.8)
General Surgery	37.1	(1.1)	100.0	0.0	--	8.6	(1.9)	75.3	(2.9)	16.2	(2.5)
Cardiovascular/ Thoracic Surgery	52.6	(1.5)	100.0	0.0	--	4.0	(1.5)	43.4	(3.9)	52.6	(3.9)
Obstetrics/Gynecology	9.3	(0.7)	100.0	11.3	(1.9)	73.0	(2.7)	13.7	(2.1)	2.1	(0.9)
Ophthalmology	51.8	(1.6)	100.0	1.6	(1.0)	3.5	(1.4)	44.6	(3.8)	50.3	(3.8)
Orthopedic Surgery	25.9	(1.2)	100.0	1.4	(1.0)	26.2	(3.6)	69.5	(3.8)	3.0	(1.4)
Urology	47.8	(1.5)	100.0	0.4	(0.5)	4.2	(1.5)	55.2	(3.7)	40.2	(3.6)
Other Surgical Specialties	24.8	(1.3)	100.0	3.1	(1.3)	30.9	(3.5)	57.8	(3.7)	8.2	(2.1)
Psychiatry	11.8	(1.1)	100.0	28.1	(3.1)	47.0	(3.5)	22.2	(2.9)	2.8	(1.2)
Anesthesiology	30.8	(0.9)	100.0	1.6	(0.9)	7.9	(1.8)	84.4	(2.5)	6.1	(1.6)
Radiology	31.4	(1.0)	100.0	0.7	(0.6)	9.0	(2.2)	86.0	(2.7)	4.4	(1.6)
Other Specialties	30.5	(1.4)	100.0	4.0	(1.4)	18.0	(2.8)	65.4	(3.4)	12.6	(2.4)

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

cardiologists to 9.3 percent for obstetricians/gynecologists. Three specialties -- cardiologists, cardiovascular/thoracic surgeons, and ophthalmologists -- derived more than half of their revenues from Medicare Part B. Obstetricians/gynecologists, "other" medical specialists, and psychiatrists relied very little on Medicare Part B. The category "other medical specialists" includes pediatricians, who in general do not treat Medicare patients.

Table 3-1 also shows the distribution of physicians according to levels of Medicare caseloads. The categories and sample sizes are as follows:

Category	Percent of Revenues from Medicare	Number of Physicians
None	0%	229
Low	1 - 15%	621
Medium	16 - 50%	1,838
High	Over 50%	640

Other medical specialists (including pediatricians), were the least likely to accept any Medicare patients: 42.1 percent received no revenues from Medicare Part B. Psychiatrists were the next lowest: 28.1 percent did not derive any revenues from Medicare patients. Obstetricians/gynecologists and psychiatrists were grouped mostly in the low caseload category. Radiologists, anesthesiologists, gastroenterologists, general surgeons, and orthopedic surgeons tended to have medium-sized Medicare caseloads. Over half of all cardiovascular/thoracic surgeons had high Medicare caseloads (exceeding 50 percent). This is not surprising given that the majority of health problems treated by cardiac/thoracic surgeons are more prevalent among the elderly (e.g., coronary artery disease). Similarly, cardiologists, ophthalmologists, and urologists have higher than average Medicare caseloads.

3.3 Specialty Differences

The 1988 PPCIS asked physicians with any Medicare patients whether they signed the Medicare participation agreement in April 1988 and January 1989. Nearly half (49.5 percent) of the physicians indicated that they had signed

the agreement as of April 1988 (Table 3-2 and Figure 3-1). A slightly lower percentage (48.6 percent) signed as of January 1989. These differences, however, are not statistically significant (t=-.073).

Table 3-2 shows participation rates by specialty for April 1988 and January 1989. No significant differences are observed in the rates within specialty between the two sign-up periods. Cardiovascular/thoracic surgeons had by far the highest participation rates, averaging 75 percent in both April 1988 and January 1989. This specialty group is highly dependent on Medicare revenues, as exhibited in Table 3-1. In addition, cardiovascular/thoracic surgeons were affected by the OBRA-1987 limits on the actual charges of non-participating physicians for overpriced procedures, including coronary artery bypass graft surgery and pacemaker implantation surgery. These thresholds correspond roughly to quartiles for all physicians in the sample.

Three other specialties had participation rates exceeding 60 percent in April 1988: radiologists (62.6 percent), general surgeons (61.1 percent), and "all other" specialties, which include pathology, neurology, and emergency medicine (63.7 percent). These specialties have consistently been above average in their propensity to sign the Medicare participation agreement (Rosenbach et al., 1988).

Three specialty groups are noteworthy for their below average participation rates. Anesthesiologists were the least likely to sign: only 30.5 percent signed in April 1988. This is consistent with previous results which found that anesthesiologists had the lowest participation rates across the first four signing periods (Rosenbach et al., 1988). One explanation for their low assignment rates is that patients do not choose their anesthesiologist, removing any incentives for anesthesiologists to "compete" on the basis of assignment practices. Also, because patients frequently do not meet the anesthesiologist before surgery, they do not have an opportunity to request that a case be taken on assignment.

Psychiatrists also had relatively low participation rates (35.5 percent in April 1988), but for a different reason. Their low participation rate may be associated with their low Medicare caseload. Recall from Table 3-1 that

TABLE 3-2

MEDICARE PARTICIPATION RATES BY SPECIALTY: APRIL 1988 AND JANUARY 1989

	MEDICARE PARTICIPATION RATES				
Specialty	April 1988		January 1989		t-value*
ALL SPECIALTIES	***49.9%***	***(0.9)***	***49.0%***	***(0.9)***	***-0.73***
General/Family Practice	47.8	(2.4)	43.5	(2.4)	-1.25
Internal Medicine	38.9	(2.5)	40.3	(2.5)	0.39
Cardiology	57.8	(4.2)	60.3	(4.1)	0.43
Gastroenterology	52.8	(4.2)	49.0	(4.2)	-0.64
Other Medical Specialties	44.9	(3.8)	43.6	(3.8)	-0.24
General Surgery	61.3	(3.3)	57.6	(3.3)	-0.79
Cardiovascular/Thoracic Surgery	76.0	(3.4)	76.3	(3.4)	0.06
Obstetrics/Gynecology	52.7	(3.2)	49.4	(3.2)	-0.73
Ophthalmology	56.0	(3.8)	56.9	(3.8)	0.17
Orthopedic Surgery	53.8	(4.1)	54.5	(4.1)	0.12
Urology	42.7	(3.7)	43.4	(3.7)	0.13
Other Surgical Specialties	53.3	(3.8)	51.1	(3.8)	-0.41
Psychiatry	35.5	(3.9)	36.1	(3.9)	0.11
Anesthesiology	30.9	(3.2)	32.6	(3.2)	0.38
Radiology	62.9	(3.7)	64.4	(3.7)	0.29
Other Specialties	64.3	(3.6)	64.5	(3.6)	0.04

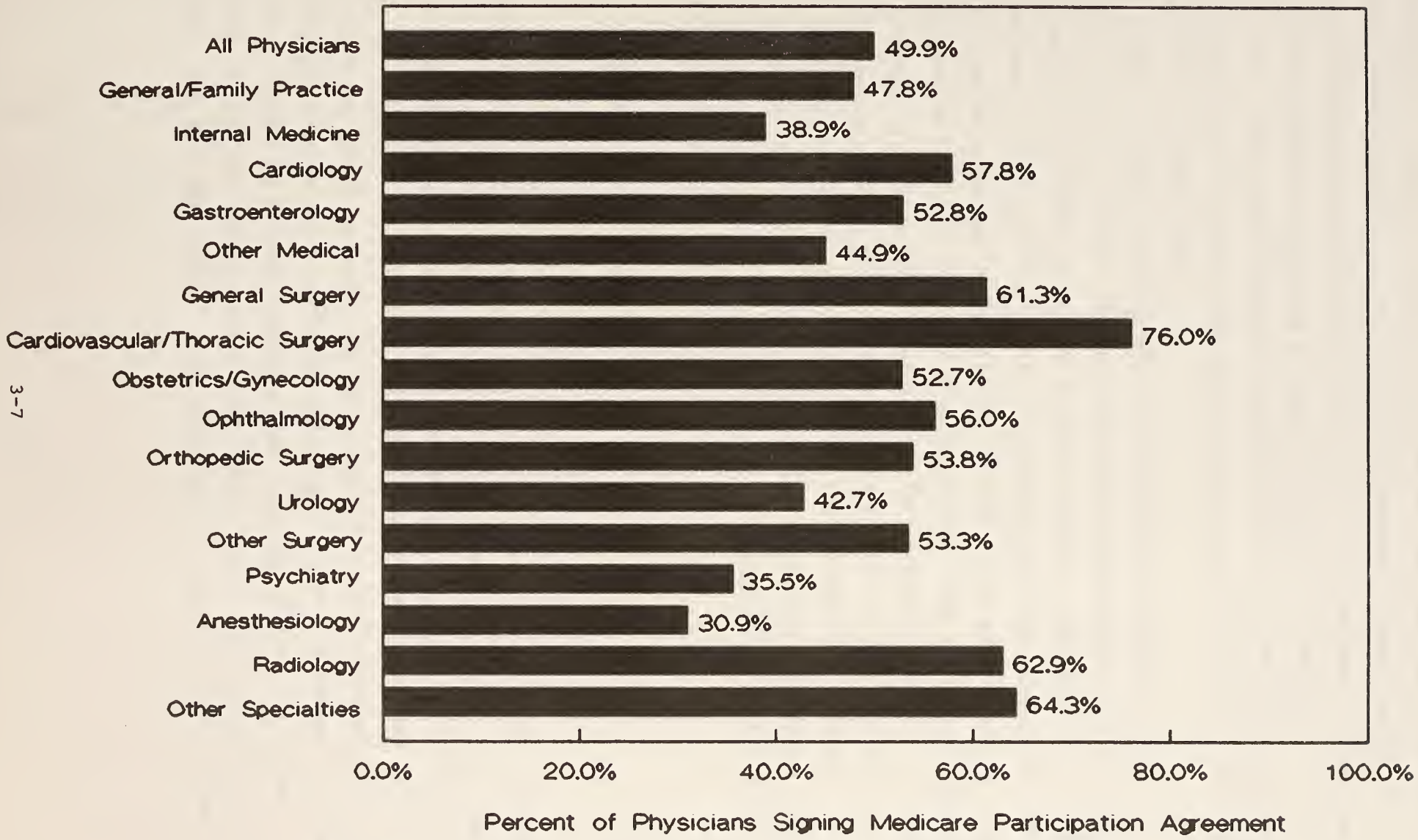
* Tests the difference in participation rates between April 1988 and January 1989. A critical value of 1.96 is required for a statistically significant difference at the 0.05 level.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

FIGURE 3-1

Medicare Participation Rates: April 1988



Source: 1988 Physicians' Practice Costs and Income Survey.

psychiatrists' revenues averaged only 12 percent from Medicare, with the majority receiving less than 15 percent from Medicare. Surprisingly, internists had below average participation rates (38.5 percent). This group was highly dependent on Medicare revenues (averaging 44.0 percent; Table 3-1). Unlike other specialty groups, anesthesiologists, psychiatrists, and internists did not post large gains in their participation rates between January 1987 and April 1988.

Table 3-3 shows the distribution of physicians according to four possible decision patterns: physicians signing in both April 1988 and January 1989, physicians signing in neither period, signers in 1988 but not in 1989, and signers in 1989 but not in 1988. Most physicians were consistent in their decision patterns across the two sign-up periods: 45.5 percent signed in both periods and 46.5 percent signed in neither period. Only 7.2 percent changed their decision: 4.1 percent who signed in 1988 decided not to sign in 1989 and 3.1 percent changed from non-participants in 1988 to participants in 1989. General and family practitioners had the highest rate of change (9.2 percent), with the majority changing from signers to non-signers. This accounts for the 4 percentage point drop in participation rates for GP/FPs between April 1988 and January 1989.

3.4 Physician Characteristics

Table 3-4 shows participation rates by various physician characteristics, such as region, urban/rural location, age, gender, Medicare caseload, board certification status, employment status, and practice size.

Physicians practicing in the Northeast were 20 percent more likely to sign the agreement in April 1988 than those practicing in the West (54.8 percent versus 46.0 percent). In fact, across the nine Census divisions, only 37 percent of physicians in the Mountain states signed the agreement, compared with 69 percent in the New England states (data not shown). Of course, several of the New England states have imposed bans on balance billing for all payors (not just Medicare). Massachusetts has a universal ban; in Rhode

TABLE 3-3

CHANGES IN MEDICARE PARTICIPATION STATUS FROM APRIL 1988 TO JANUARY 1989, BY SPECIALTY

Specialty	Signed 1988 and 1989		Did Not Sign Either Year		Signed 1988 Only		Signed 1989 Only	
ALL SPECIALTIES	***45.9%***	***(0.9)***	***46.9%***	***(0.9)***	***4.1%***	***(0.3)***	***3.1%***	***(0.3)***
General/Family Practice	41.0	(2.4)	49.8	(2.4)	6.8	(1.2)	2.4	(0.7)
Internal Medicine	35.9	(2.5)	56.7	(2.6)	2.9	(0.9)	4.5	(1.1)
Cardiology	55.4	(4.2)	37.3	(4.1)	2.5	(1.3)	4.9	(1.8)
Gastroenterology	48.2	(4.2)	46.3	(4.2)	4.6	(1.7)	0.9	(0.8)
Other Medical Specialties	41.7	(3.8)	53.3	(3.8)	3.2	(1.3)	1.9	(1.0)
General Surgery	57.6	(3.3)	38.7	(3.3)	3.6	(1.3)	0.0	--
Cardiovascular/ Thoracic Surgery	72.4	(3.5)	19.2	(3.1)	4.1	(1.6)	4.3	(1.6)
Obstetrics/Gynecology	47.7	(3.2)	45.5	(3.2)	5.1	(1.4)	1.7	(0.8)
Ophthalmology	52.1	(3.8)	39.2	(3.7)	3.0	(1.3)	4.8	(1.6)
Orthopedic Surgery	51.4	(4.1)	43.1	(4.1)	2.5	(1.3)	3.1	(1.4)
Urology	39.5	(3.6)	53.5	(3.7)	3.2	(1.3)	3.8	(1.4)
Other Surgical Specialties	49.3	(3.8)	44.8	(3.8)	4.0	(1.5)	1.8	(1.0)
Psychiatry	31.9	(3.8)	60.1	(4.0)	3.9	(1.6)	4.2	(1.6)
Anesthesiology	29.6	(3.1)	65.8	(3.3)	1.5	(0.8)	3.1	(1.2)
Radiology	58.1	(3.8)	30.9	(3.6)	4.7	(1.6)	6.3	(1.9)
Other Specialties	59.0	(3.7)	30.3	(3.4)	4.8	(1.6)	4.3	(1.5)

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

TABLE 3-4

MEDICARE PARTICIPATION RATES, BY PHYSICIAN CHARACTERISTICS

	MEDICARE PARTICIPATION RATES				
	April 1988		January 1989		t-value
ALL PHYSICIANS	***49.9%***	***(0.9)***	***49.0%***	***(0.9)***	***-0.726***
REGION					
Northeast	55.2	(1.9)	53.1	(1.9)	-0.769
Excluding Mandatory Assignment States[a]	51.0	(2.2)	48.8	(2.2)	-0.707
North Central	48.9	(1.8)	49.0	(1.8)	-0.038
South	49.7	(1.5)	49.7	(1.5)	-0.000
West	46.1	(1.9)	43.9	(1.9)	-0.830
URBAN/RURAL					
Rural	48.8	(1.7)	49.3	(1.7)	0.202
Urban	50.1	(1.0)	49.0	(1.0)	-0.767
AGE					
34 and under	49.2	(2.6)	50.9	(2.6)	0.454
35-39	54.4	(2.0)	51.5	(2.0)	-1.049
40-49	49.5	(1.5)	48.6	(1.5)	-0.419
50-59	49.7	(1.9)	50.4	(1.9)	0.265
60-64	48.2	(3.2)	46.6	(3.2)	-0.356
65 and over	42.0	(3.5)	38.1	(3.5)	-0.789
MEDICARE CASELOAD					
Low (1-15%)	45.1	(2.0)	43.5	(2.0)	-0.567
Medium (16-50%)	50.7	(1.2)	50.2	(1.2)	-0.303
High (over 50%)	57.0	(2.0)	56.1	(2.0)	-0.325
MEDICAID CASELOAD					
None (0%)	33.6	(2.2)	32.6	(2.2)	-0.316
Low (1-10%)	51.3	(1.1)	51.1	(1.1)	-0.125
High (over 10%)	60.5	(1.9)	59.3	(1.9)	-0.455
FMG STATUS					
U.S. Medical Graduate	49.1	(0.9)	48.4	(0.9)	-0.540
Foreign Medical Graduate	58.6	(3.0)	55.7	(3.0)	-0.690
SEX					
Male	49.6	(0.9)	49.0	(0.9)	-0.468
Female	53.9	(3.4)	49.6	(3.4)	-0.885
BOARD CERTIFICATION					
No	51.3	(1.8)	50.7	(1.8)	-0.240
Yes	49.5	(1.0)	48.5	(1.0)	-0.700
EMPLOYMENT STATUS					
Employed	56.2	(2.5)	58.2	(2.5)	0.557
Self-Employed	49.0	(0.9)	47.7	(0.9)	-0.986
PRACTICE SIZE					
Solo	51.1	(1.2)	48.8	(1.2)	-1.352
Group	49.0	(1.3)	49.3	(1.3)	0.166

[a]Excludes physicians in four states in the Northeast region that have mandatory assignment regulations: Massachusetts, Vermont, Rhode Island, and Connecticut.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

Island, Connecticut, and Vermont, the balance billing limits are means tested for the patient's income. Excluding these four states, the participation rate for the Northeast was 51 percent in April 1988, roughly comparable to the other regions.

Participation rates did not vary nationally according to whether a physician practiced in a rural area or an urban area. However, there were substantial differences in participation rates for rural physicians among the four regions of the country (Table 3-5). Whereas three-fourths of the rural physicians in the Northeast signed the participation agreement in April 1988, only about one-third in the West were participants. Clearly, access to participating physicians among rural Medicare beneficiaries varies widely across the country. Much smaller variations were found among urban physicians, especially after excluding physicians in the mandatory assignment states in the Northeast.

Participation patterns varied somewhat by physician age. Older physicians, over age 65, were less likely to sign than their younger colleagues. For example, 53.8 percent of those ages 35 through 39 signed the agreement in April 1988, compared with 41.6 percent of those over age 65.

Physicians with high Medicare caseloads were much more likely to sign the agreement than those with low Medicare caseloads. About 57 percent of those with larger Medicare caseloads signed the agreement in 1988, versus 45 percent of those with small Medicare caseloads. However, it is difficult to determine the direction of causality. Physicians may sign the agreement in order to increase their share of the Medicare market, thus increasing the size of their Medicare caseload, or they may sign because they have a large proportion of Medicare patients and wish to receive larger fee updates.

Participation rates also varied according to the size of a physician's Medicaid caseload (excluding joint Medicare-Medicaid eligibles). Only one-third of those with no Medicaid patients signed, versus 51 percent of those with small Medicaid caseloads and 60 percent of those with relatively large Medicaid caseloads. Moreover, participating physicians had a higher share of low-income elderly patients, on average, than nonparticipating physicians (13.8 percent versus 10.0 percent; $t=3.39$; $p<0.05$).

TABLE 3-5

MEDICARE PARTICIPATION RATES BY REGION AND URBAN/RURAL LOCATION: APRIL 1988

	Urban		Rural	
Northeast	53.4	(2.1)	74.7*	(4.2)
Excluding Mandatory Assignment States[a]	48.9	(1.0)	74.2*	(1.5)
North Central	50.1	(2.2)	44.3	(3.3)
South	49.8	(1.8)	48.9	(2.6)
West	47.2	(2.1)	37.9*	(4.2)

[a]Excludes physicians in four states in the Northeast region that have mandatory assignment regulations: Massachusetts, Vermont, Rhode Island and Connecticut.

*Differences between urban and rural rates are significant at the 0.05 level.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

Graduates of foreign medical schools participate at a significantly higher rate than graduates of domestic medical schools (58.3 percent versus 48.7 percent). Over 6 percent of foreign medical graduates changed their participation status between the two sign-up periods, leading to a net decrease of 3 percent in their participation rate from April 1988 to January 1989 (data not shown).

No meaningful differences were observed between men and women physicians or between board-certified and non-board-certified physicians. Physician employees were significantly more likely than self-employed physicians to report signing the participation agreement, although participation rates did not vary according to solo versus group practice.

Closer inspection of participation rates according to the number of physicians in the practice revealed a decline in participation rates as group size increased above ten physicians. For example, in April 1988, groups with fewer than ten physicians had participation rates in the 49-52 percent range. Those with 11-25 physicians had a participation rate of 43 percent, while only 31 percent of physicians in groups with over 25 physicians signed the agreement.

3.5 Time Trends

How have participation rates changed over time? Data are available from the 1986 Physicians' Practice Follow-up Survey (PPFS) to develop a time-series of participation rates for six sign-up periods from October 1984 through January 1989. Because the sample for the 1986 PPFS excluded pediatricians, psychiatrists, pathologists, and "all other" specialties (except neurology), it was necessary to eliminate these specialties in the computation of participation rates based on the 1988 PPCIS. In addition, the 1986 PPFS sample was limited to physicians who were self-employed or employed by a physician or group of physicians.

Table 3-6 presents time trends in Medicare participation rates.* Participation rates rose dramatically between January 1987 and April 1988 for both employed and self-employed physicians. Whereas about one-third of the self-employed physicians signed the agreement in the four sign-up periods through January 1987, the rate jumped by 12 percentage points to 48.8 percent, as of April 1988. A number of policy levers were implemented in April 1988 that might explain this large, one-time jump in participation rates. First, the Omnibus Budget Reconciliation Act of 1987 gave participating physicians a 3.6 percent increase in the Medicare Economic Index for primary care services and a one percent increase for all other services. Non-participating physicians received 95.5 percent of the prevailing charges for participating physicians, that is, a 3.1 percent increase for primary care services and a 0.5 percent increase for all other services. Even smaller increases were promised to non-participating physicians in 1989. Second, and more importantly, OBRA-1987 established a limit on non-participating physicians' actual charges for overpriced procedures (a list of 12 high-volume Medicare procedures). The limit was 125 percent of the prevailing charge for the procedure, including the overpriced procedure rollbacks. Other incentives include bonuses to carriers for increasing participation rates and publication of directories containing the names of participating physicians.

3.6 Comparisons with Other Data Sources

Table 3-7 compares data for the two sign-up periods across three data sources: the 1988 PPCIS, the 1988 Socioeconomic Monitoring System (SMS) conducted by the American Medical Association, and HCFA carrier data. The 1988 PPCIS and the 1988 SMS yield remarkably comparable estimates of the participation rate for April 1988. The participation rate reported by the SMS is 52.6 percent, just outside the confidence interval for the 1988 PPCIS rate for the same period. (Unfortunately, standard errors and confidence intervals are not available for the 1988 SMS results.) The samples for the two surveys

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*Because the figures in Table 3-6 have been adjusted to produce comparability between the two data sources, the April 1988 participation rate drops from 49.9 to 49.4 percent due to the exclusion of selected specialties.

TABLE 3-6

TIME TRENDS IN MEDICARE PARTICIPATION RATES[a]

	PARTICIPATION RATE		
	N	Mean	Standard Error
October 1984	2,145	35.5*	1.0
October 1985	2,135	32.7*	1.0
May 1986	2,129	34.1*	1.0
January 1987	2,108	36.8*	1.1
April 1988	2,873	49.4	0.9
January 1989	2,868	48.3	0.9

[a]Excludes pathologists, pediatricians, psychiatrists, and "all other" specialties (except neurology) to achieve comparability between the 1986 Physicians' Practice Follow-Up Survey and the 1988 Physicians' Practice Costs and Income Survey. Also excludes physicians employed by HMOs, hospitals, clinics and faculty practice plans.

*Participation rate is significantly different from April 1988 rate.

Sources: 1986 Physicians' Practice Follow-up Survey;
1988 Physicians' Practice Costs and Income Survey.

TABLE 3-7

COMPARISONS OF MEDICARE PARTICIPATION RATES

	MEDICARE PARTICIPATION RATES		
	1988 PPCIS[a]	SMS[b]	HCFA[c]
April 1988	49.5% (48.2 - 51.6)	52.6%	37.6%
January 1989	48.6% (47.3 - 50.7)	--	40.2%

[a]Based on a random sample of nonfederal, nonresident, patient-care physicians (MDs). 95 percent confidence interval in parentheses.

[b]Based on a random sample of nonfederal, nonresident, patient-care physicians (MDs).

[c]Includes both MDs and DOs.

Sources:
1. 1988 Physicians' Practice Costs and Income Survey.
2. American Medical Association, Socioeconomic Monitoring System.
3. Health Care Financing Administration, Bureau of Program Operations.

are similar in several respects: both are limited to nonfederal, nonresident, active patient-care physicians (MDs only). Also, both surveys obtain individual, physician-level reports of participation status. Finally, the questionnaire wording is quite similar, as shown below.

1988 PPCIS: In 1984, Congress enacted legislation concerning Medicare and assignment of benefits. Physicians were given an opportunity to sign an agreement to accept assignment for all of their Medicare patients. Did you sign the agreement for the period beginning April 1988?

1988 SMS: By October 1, 1984, all physicians had to decide whether or not to sign agreements to become participating physicians under the newly-established Medicare Participating Physician Program. Several sign-up periods have been offered since then. The last decision deadline was December 31, 1987. (If questionnaire was administered after March 31st, then the question reads "The last deadline was March 31, 1988.") Did you sign an agreement to participate in the Medicare program that is currently in effect? As a participating physician, assignment must be accepted on all Medicare claims.

Thus, similarities in both the sample design and questionnaire wording explain the comparability of the results. The HCFA participation rate of 37.6 percent is substantially lower than the others. Differences remained between the PPCIS and HCFA estimates for January 1989, although the gap narrowed slightly. What accounts for the differences between the PPCIS and HCFA estimates? First, HCFA carrier data are based on all physicians, without restrictions on residency status, MDs or DOs, or patient care status. Another important difference is that HCFA participation rates are measured as the number of participation agreements as a percentage of all providers billing Medicare. A provider may be a single physician or a group of physicians. Also, a physician or group may have more than one provider ID. Thus, the carrier data do not represent individual physician-level participation rates. Previous comparisons of HCFA carrier data with the 1983 PPCIS and the 1986

Follow-up Survey consistently have shown similar results, with higher rates obtained in the physician surveys (Rosenbach et al., 1985; Rosenbach et al., 1988).

3.7 Assignment Rates of Nonparticipants

Under the Medicare Participating Physicians' Program, nonparticipants may continue to accept assignment on a case-by-case basis. On average, they accepted one-in-three cases on assignment (Figure 3-2). This ranged more than two-fold across specialties. Nonparticipating general/family practitioners accepted only 20 percent on assignment, while cardiovascular/thoracic surgeons accepted 46 percent of cases, on average. Thus, not only do cardiovascular/thoracic surgeons have high participation rates, but among nonparticipants, they have a propensity to accept assignment.

3.8 Characteristics of De Facto Participants

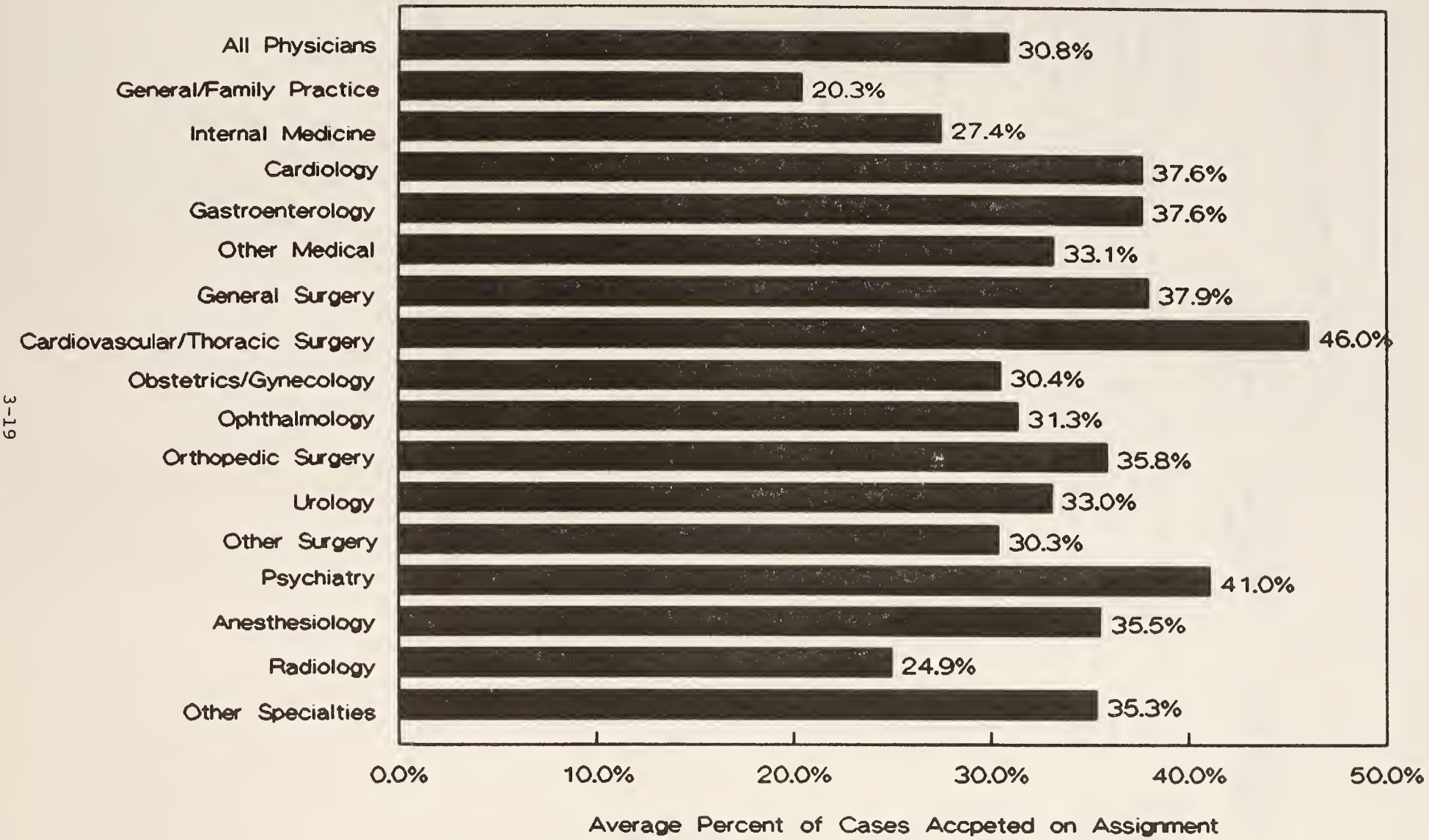
Among the nonparticipants, there is a small number of physicians who accept 100 percent of cases on assignment but decline to sign the participation agreement. These physicians are termed "de facto" participants, because in essence, they are abiding by the terms of the participation agreement by accepting all cases on assignment. What is puzzling is that they do not sign the agreement to avail themselves of the more generous payments, fee updates and other incentives.

According to the 1988 PPCIS, 8 percent of nonparticipants (4 percent of all physicians with Medicare patients) were de facto participants in April 1988. A similar percentage (6 percent) were de facto participants in the preceeding four sign-up periods (Rosenbach et al., 1988).

Who are the de facto participants and how do they compare to participating and other nonparticipating physicians? Table 3-8 shows that there is very little difference in the specialty mix between the two groups. Given the small number of de facto participants (n=122), it is not possible to

FIGURE 3-2

Assignment Rates of Nonparticipating Physicians



Source: 1988 Physicians' Practice Costs and Income Survey.

TABLE 3-8

CHARACTERISTICS OF DE FACTO PARTICIPANTS

	"Actual" Participants (n=1619)		"De Facto" Participants (n=122)		"True" Nonparticipants (n=1481)	
SPECIALTY GROUP						
General/Family Practice	15.2%	(2.6)	12.1%	(8.7)	17.0%	(2.6)
Medical Specialties	24.3	(2.2)	26.7	(8.8)	30.6	(2.3)
Surgical Specialties	37.1	(1.8)	33.0	(6.8)	29.8	(2.0)
Other Specialties	23.3	(2.3)	28.1	(7.6)	22.6	(2.3)
REGION						
Northeast	24.8	(2.2)	30.5	(8.3)	19.2	(2.5)
North Central	21.2	(2.2)	13.7	(8.1)	22.8	(2.2)
South	33.2	(2.0)	36.6	(7.0)	33.3	(2.1)
West	20.8	(2.3)	19.2	(7.9)	24.7	(2.3)
URBAN/RURAL LOCATION						
Rural	15.0	(1.8)	12.9	(7.3)	15.9	(1.9)
Urban	85.0	(1.0)	87.1	(3.5)	84.1	(1.1)
MEDICARE DEPENDENCE						
Low	20.2	(2.4)	35.8	(7.3)	24.0	(2.4)
Medium	60.0	(1.6)	52.6	(6.6)	60.5	(1.7)
High	19.9	(2.1)	11.6	(7.8)	15.6	(2.3)
Average Percent	35.1	(0.5)	27.4	(1.9)	32.3	(0.5)

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

produce a more detailed specialty distribution. De facto participants are under-represented in the North Central region of the country, but no differences are observed with respect to urban/rural location. The most telling difference, however, is the size of their Medicare caseload. Thirty-six percent of the de facto participants, but only 20 percent of the actual participants and 24 percent of nonparticipants had low Medicare caseloads (defined as less than 15 percent of total caseload). At the other extreme, 12 percent of the de facto participants had a high Medicare caseload (versus 20 percent of the actual participants and 16 percent of nonparticipants). On average, 27 percent of the de facto participants' caseload was attributable to Medicare versus 32-35 percent for the two other groups.

4.0 PHYSICIANS' BILLING PRACTICES FOR THE MEDICARE DEDUCTIBLE AND COINSURANCE

4.1 Introduction

Little has been published about physicians' billing practices for the Medicare deductible and coinsurance. Although physicians are required to collect the copayments routinely from the patient or a supplemental insurer, carriers have not enforced this requirement except in the most blatant offenses. For example, physicians who advertise that a copayment will be waived to gain a competitive advantage have been cited for their infraction (Norman, 1989). With increasing assignment rates among both participating and non-participating physicians, the deductible and coinsurance are becoming the sole source of price sensitivity in the utilization decision, from the patient's perspective.

Recognizing that limited information was available on physicians' billing practices for the deductible and coinsurance, Congress mandated a study of "the collection rates among different classes of physicians for such liabilities, including collection rates for required coinsurance and for charges (not paid on an assignment-related basis) in excess of the reasonable charge recognized" (Omnibus Budget Reconciliation Act of 1987). The 1988 Physicians' Practice Costs and Income Survey gathered information from a sample of physicians on whether they bill patients (or the supplemental insurer) for the required copayments. Although most of the focus in the survey was on whether physicians merely billed for the deductible and coinsurance, the survey also asked physicians to report their collection rates for the required copayments as well as for excess charges on non-assigned cases (the balance bill). However, these collection rate figures were more difficult for the physicians to report (Recall Table 2-1).

This chapter discusses physicians' billing practices for the deductible and coinsurance for assigned patients, distinguishing between those with supplemental coverage and those with no supplemental coverage. Variations by

specialty, geographic location, physician demographic characteristics, and Medicare involvement are identified and discussed. The final section of this report discusses areas for further research.

4.2 Extent of Supplemental Coverage Among Medicare Beneficiaries

Physicians' billing patterns for patients with supplemental insurance may be influenced by the proportion of their patients that are covered by supplemental insurance. For example, a physician with only a few privately insured patients may not bother with the paperwork and instead bill the patient directly. If a large proportion of a physician's patients are insured, it is in the economic interests of the physician to bill the insurer directly.

Over half (54.2 percent) of all physicians' Medicare patients have private supplemental insurance covering the deductible and coinsurance, and another 11.9 percent of physicians' Medicare patients are also covered by Medicaid (Table 4-1). Some specialties averaged higher percentages of privately insured patients than others. Three surgical specialties -- cardiovascular/thoracic surgeons, ophthalmologists, and urologists -- had the highest proportions of Medicare patients with private supplemental coverage (over 60 percent). In contrast, only 42 percent of psychiatrists' Medicare caseload had Medigap coverage ($p<0.05$). This is likely a function of the disproportionate share of mentally disabled persons who would be unable to afford Medigap coverage. Dual Medicaid coverage ranges from 8 percent of the Medicare caseload among other surgical specialties and cardiologists to about 14 percent among internists ($p<0.05$).

4.3 Physician Billing Practices for Patients with Supplemental Insurance

The 1988 PPCIS asked physicians who they bill -- the patient or the supplemental insurer/Medicaid -- for the deductible and coinsurance, when the patient has supplemental coverage (or Medicaid). This question is intended to ascertain who physicians bill when they do bill for the copayments and <u>not</u> how

TABLE 4-1

EXTENT OF SUPPLEMENTAL COVERAGE AMONG MEDICARE PATIENTS, BY SPECIALTY

	AVERAGE PERCENT OF PATIENTS WITH:				PERCENT OF PATIENTS COVERED BY SUPPLEMENTAL INSURANCE									
	Private Medigap Coverage		Joint Medicaid Coverage		None		1-33%		34-67%		68-99%		All	
					(Percent of Physicians)									
ALL SPECIALTIES	***54.2%***	***(0.6)***	***11.9%***	***(0.3)***	***2.7%***	***(0.3)***	***20.6%***	***(0.7)***	***24.4%***	***(0.8)***	***39.7%***	***(0.9)***	***12.6%***	***(0.6)***
General/Family Practice	49.9	(1.6)	13.6	(0.9)	1.5	(0.6)	24.1	(2.1)	26.1	(2.1)	33.5	(2.3)	14.9	(1.7)
Internal Medicine	55.0	(1.5)	13.9	(0.9)	1.4	(0.6)	15.7	(1.9)	26.8	(2.3)	44.8	(2.6)	11.3	(1.6)
Cardiology	58.2	(2.5)	8.1	(0.9)	1.4	(1.0)	16.4	(3.1)	25.6	(3.7)	47.7	(4.2)	8.9	(2.4)
Gastroenterology	57.3	(2.4)	11.5	(1.3)	2.1	(1.2)	17.1	(3.1)	29.9	(3.8)	43.9	(4.1)	7.0	(2.1)
Other Medical Specialties	55.5	(2.3)	11.3	(1.2)	5.9	(1.8)	18.6	(3.0)	23.4	(3.2)	41.4	(3.8)	10.8	(2.4)
General Surgery	54.6	(2.1)	12.2	(1.0)	2.5	(1.1)	19.0	(2.6)	22.7	(2.8)	41.4	(3.3)	14.4	(2.4)
Cardiovascular/Thoracic Surgery	64.5	(2.0)	10.7	(0.9)	0.0	--	7.3	(2.1)	26.5	(3.5)	53.8	(3.9)	12.4	(2.6)
Obstetrics/Gynecology	51.0	(2.5)	8.4	(1.1)	4.5	(1.3)	29.4	(2.9)	21.6	(2.7)	30.4	(3.0)	14.2	(2.2)
Ophthalmology	63.8	(2.1)	9.6	(0.9)	1.0	(0.8)	10.4	(2.3)	25.0	(3.3)	51.9	(3.8)	11.7	(2.5)
Orthopedic Surgery	56.2	(2.6)	13.3	(1.6)	0.6	(0.6)	22.2	(3.4)	18.2	(3.2)	44.9	(4.1)	14.1	(2.9)
Urology	61.5	(1.9)	9.3	(1.0)	2.5	(1.2)	10.4	(2.3)	27.2	(3.3)	48.0	(3.7)	11.9	(2.4)
Other Surgical Specialties	58.2	(2.4)	8.0	(0.9)	4.4	(1.6)	18.3	(2.9)	21.0	(3.1)	43.2	(3.8)	13.1	(2.6)
Psychiatry	42.3	(2.9)	12.8	(1.8)	7.3	(2.1)	28.2	(3.7)	26.7	(3.6)	20.9	(3.3)	16.9	(3.1)
Anesthesiology	55.0	(2.1)	12.2	(1.0)	0.8	(0.6)	19.2	(2.7)	27.2	(3.1)	39.5	(3.4)	13.3	(2.3)
Radiology	57.4	(2.4)	14.5	(1.6)	2.3	(1.2)	22.5	(3.2)	21.5	(3.2)	41.7	(3.8)	12.0	(2.5)
Other Specialties	48.3	(2.7)	13.4	(1.5)	4.0	(1.5)	29.0	(3.4)	23.2	(3.1)	34.9	(3.6)	9.0	(2.1)

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

often they bill. In the case of an assigned Medicare patient with supplemental insurance, physicians are nearly four times more likely to go directly to the insurance company in their initial attempts at seeking payment for the deductible and coinsurance (Table 4-2). On average, physicians billed the patient directly in only 19 percent of the cases, while in 80 percent of the cases they reported billing the insurer directly. Stated in another way, 71 percent of physicians always billed the insurer for the deductible and coinsurance, 21 percent sometimes billed the insurer (and sometimes billed the patient), while the remaining 8 percent never billed the insurer, instead preferring to bill the patient directly (Table 4-3).

Cardiovascular/thoracic surgeons were most likely to bill the insurer directly (and conversely, least likely to bill the patient). They sent a bill directly to the supplemental insurer in 92 percent of their cases. Several explanations are possible for this finding. First, this specialty is highly dependent on Medicare and thus, would be more likely than other specialties to develop billing processes that are tailored to the Medicare reimbursement system. Second, given the high average charges for services and procedures provided by this specialty, the coinsurance amounts are not inconsequential. Physicians often stated that they routinely bill the patient for services rendered on an outpatient basis, while billing the insurer for inpatient services. Thus, it is not surprising that cardiovascular/thoracic surgeons would develop billing procedures to collect the coinsurance in particular. Third, given the high participation rates, most of their claims are submitted directly to the Medicare carrier rather than the patient. It makes sense, therefore, that the bill for the copayments would be sent directly to the supplemental insurer (rather than the patient) to reduce collection costs and raise the collection rate. This would be especially true in cases where the supplemental insurer also happens to be the Medicare carrier. Finally, cardiovascular/thoracic surgeons are more likely to perform their services in an inpatient setting.

In general, physicians with significant hospital-based practices, such as other specialists (which includes pathologists, neurologists, and emergency physicians), general surgeons, obstetricians/gynecologists, cardiologists, and

TABLE 4-2

PHYSICIAN BILLING PRACTICES FOR MEDICARE PATIENTS WITH SUPPLEMENTAL INSURANCE/MEDICAID COVERAGE, BY SPECIALTY[a]

	Average percent of cases where insurer is billed		Average percent of cases where patient is billed		Unknown*	
ALL SPECIALTIES	***80.3%***	***(0.8)***	***18.6%***	***(0.8)***	***1.0%***	***(0.2)***
General/Family Practice	75.7	(2.4)	23.4	(2.4)	1.3	(0.6)
Internal Medicine	72.7	(2.6)	26.5	(2.5)	0.5	(0.4)
Cardiology	85.4	(3.2)	14.9	(3.2)	0.5	(0.6)
Gastroenterology	78.7	(3.8)	19.7	(3.6)	1.3	(1.0)
Other Medical Specialties	78.4	(3.6)	20.6	(3.6)	1.0	(0.9)
General Surgery	85.4	(2.6)	13.1	(2.5)	0.9	(0.7)
Cardiovascular/ Thoracic Surgery	92.4	(2.3)	7.6	(2.3)	0.0	--
Obstetrics/Gynecology	84.1	(3.0)	14.9	(2.9)	0.6	(0.6)
Ophthalmology	81.8	(3.3)	16.3	(3.2)	2.1	(1.2)
Orthopedic Surgery	83.1	(3.4)	16.1	(3.3)	0.8	(0.8)
Urology	82.6	(3.2)	13.8	(2.9)	2.8	(1.4)
Other Surgical Specialties	84.2	(3.3)	13.7	(3.1)	3.1	(1.6)
Psychiatry	78.3	(4.6)	19.6	(4.4)	1.3	(1.3)
Anesthesiology	84.1	(2.9)	15.4	(2.8)	0.0	--
Radiology	78.4	(3.6)	19.9	(3.5)	1.0	(0.9)
Other Specialties	85.1	(3.2)	15.0	(3.2)	0.4	(0.6)

[a]Reflects physicians' billing practices for the deductible and coinsurance for assigned cases only.

*Represents a residual in the 60 cases (2.4 percent) in which the physician reported billing neither the insurer nor the patient.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

TABLE 4-3

PERCENT OF PHYSICIANS BILLING THE SUPPLEMENTAL INSURER OR MEDICAID FOR DEDUCTIBLE AND COPAYMENT, BY SPECIALTY

Specialty	Always		Sometimes		Never	
ALL SPECIALTIES	***70.9%***	***(0.9)***	***21.0%***	***(0.8)***	***8.1%***	***(0.5)***
General/Family Practice	67.1	(2.7)	23.5	(2.4)	9.4	(1.7)
Internal Medicine	59.3	(2.8)	29.6	(2.6)	11.2	(1.8)
Cardiology	77.8	(3.8)	16.3	(3.4)	5.9	(2.1)
Gastroenterology	65.3	(4.4)	24.5	(3.9)	10.0	(2.8)
Other Medical Specialties	69.3	(4.1)	19.1	(3.5)	11.6	(2.8)
General Surgery	76.3	(3.2)	18.7	(2.9)	5.1	(1.6)
Cardiovascular/Thoracic Surgery	80.2	(3.4)	17.1	(3.2)	2.8	(1.4)
Obstetrics/Gynecology	77.5	(3.4)	16.2	(3.0)	6.2	(2.0)
Ophthalmology	63.5	(4.1)	31.4	(4.0)	5.1	(1.9)
Orthopedic Surgery	75.6	(3.8)	18.2	(3.5)	6.3	(2.2)
Urology	74.7	(3.6)	20.0	(3.3)	5.4	(1.9)
Other Surgical Specialties	78.4	(3.7)	15.6	(3.3)	6.0	(2.1)
Psychiatry	74.7	(4.9)	12.8	(3.7)	12.5	(3.7)
Anesthesiology	73.8	(3.5)	18.6	(3.1)	7.7	(2.1)
Radiology	72.2	(3.9)	18.1	(3.4)	9.7	(2.6)
Other Specialties	77.2	(3.7)	18.2	(3.4)	4.6	(1.9)

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

other surgical specialists are also more likely to bill the insurer directly. This may be due, in part, to their reliance on the hospital's billing preferences, as well as the significance of the copayment amounts for high cost procedures.

Internists were the least likely to bill the supplemental insurer/Medicaid directly. On average, the patient (rather than the insurer) was billed for the deductible and coinsurance in one-fourth of the cases (Table 4-2). Forty percent of the internists reported that they always or sometimes bill the privately insured/Medicaid patient for the copayments. One hypothesis is that many internists engage primarily in office-based practice and request payment from the patient at the time the service is rendered, rather than billing the patient (or the insurer) at a later date.

The physicians who sometimes bill the patient and sometimes bill the supplemental insurance company form an interesting subgroup. What factors account for this mixed billing mode? A review of verbatim comments revealed that the locus of care (inpatient versus outpatient) may be a factor. The type of third-party payor may also be a determinant. Perhaps when the Medicare carrier also serves as the supplemental insurer, the physician files the claim but otherwise lets the patient handle the paperwork. The responses classified in the "sometimes" category are on a continuum, for example, with some physicians billing the patient more often than the insurer, while other physicians bill the insurer more often than the patient. There were some systematic differences across specialties. Psychiatrists in the "sometimes" category billed the insurer an average of 80 percent of the time, the highest of any specialty. At the other extreme, physicians in two specialties -- general/family practitioners and radiologists -- billed the insurer only 40 percent of the time, on average, and billed the patient 60 percent of the time.

Billing practices for insured patients varied by other physician characteristics as well (Tables 4-4 and 4-5). Physicians in the South were significantly more likely than those in the other three regions to always bill the insurer directly (76 percent versus 68 percent). There were no differences in billing practices by urban/rural location.

TABLE 4-4

PHYSICIAN BILLING PRACTICES FOR MEDICARE PATIENTS WITH SUPPLEMENTAL INSURANCE COVERAGE, BY PHYSICIAN CHARACTERISTICS[a]

	Average percent of cases where insurer is billed		Average percent of cases where patient is billed		Unknown*	
ALL PHYSICIANS	***80.3%***	***(0.8)***	***18.6%***	***(0.8)***	***1.0%***	***(0.2)***
REGION						
Northeast	77.0	(1.9)	21.5	(1.9)	1.6	(0.6)
North Central	80.7	(1.7)	19.2	(1.7)	0.6	(0.3)
South	82.8	(1.3)	15.9	(1.2)	0.9	(0.3)
West	79.5	(1.8)	19.3	(1.7)	1.0	(0.4)
URBAN/RURAL						
Rural	81.0	(1.5)	17.5	(1.5)	1.3	(0.4)
Urban	80.1	(0.9)	18.8	(0.9)	1.0	(0.2)
AGE						
34 and under	77.3	(2.6)	22.0	(2.5)	1.0	(0.6)
35-39	80.7	(1.7)	18.7	(1.7)	0.5	(0.3)
40-49	81.0	(1.4)	18.1	(1.3)	1.0	(0.3)
50-59	84.4	(1.6)	14.3	(1.5)	1.0	(0.4)
60-64	76.6	(3.2)	22.9	(3.2)	0.5	(0.5)
65 and over	70.6	(4.1)	24.9	(3.9)	3.9	(1.7)
MEDICARE CASELOAD						
Low (1-15%)	78.7	(2.1)	19.6	(2.0)	1.4	(0.6)
Medium (16-50%)	81.9	(1.0)	17.4	(1.0)	0.7	(0.2)
High (over 50%)	78.6	(1.8)	19.7	(1.8)	1.7	(0.6)
FMG STATUS						
U.S. Medical Graduate	80.0	(0.8)	18.9	(0.8)	1.0	(0.2)
Foreign Medical Graduate	82.8	(2.5)	15.7	(2.5)	1.5	(0.8)
SEX						
Male	80.3	(0.8)	18.6	(0.8)	1.0	(0.2)
Female	79.5	(3.2)	19.2	(3.1)	0.8	(0.7)
BOARD CERTIFICATION						
No	78.3	(1.7)	19.7	(1.6)	1.9	(0.6)
Yes	80.9	(0.9)	18.3	(0.9)	0.7	(0.2)
EMPLOYMENT STATUS						
Employed	80.6	(2.3)	19.3	(2.3)	0.1	(0.2)
Self-Employed	80.9	(0.8)	18.5	(0.8)	1.2	(0.2)
PRACTICE SIZE						
Solo	78.6	(1.2)	19.7	(1.2)	1.6	(0.4)
Group	81.7	(1.1)	17.7	(1.0)	0.6	(0.2)

[a]Reflects physicians' billing practices for the deductible and coinsurance for assigned cases only.

*Represents a residual in the 60 cases (2.4 percent) in which the physician reported billing neither the insurer nor the patient.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

TABLE 4-5

PERCENT OF PHYSICIANS BILLING INSURER FOR DEDUCTIBLE AND COPAYMENT, BY PHYSICIAN CHARACTERISTICS[a]

	Always		Sometimes		Never	
ALL PHYSICIANS	***70.9%***	***(0.9)***	***21.0%***	***(0.8)***	***8.1%***	***(0.5)***
REGION						
Northeast	68.5	(2.0)	21.8	(1.7)	9.7	(1.3)
North Central	67.5	(2.0)	23.6	(1.8)	8.8	(1.2)
South	76.3	(1.4)	16.1	(1.2)	7.6	(0.9)
West	68.2	(2.0)	25.3	(1.8)	6.6	(1.0)
URBAN/RURAL						
Rural	72.7	(1.8)	20.7	(1.6)	6.5	(1.0)
Urban	70.5	(1.0)	21.1	(0.9)	8.4	(0.6)
AGE						
34 and under	66.8	(2.8)	25.0	(2.6)	8.3	(1.6)
35-39	68.0	(2.0)	25.5	(1.9)	6.5	(1.1)
40-49	71.6	(1.5)	20.1	(1.4)	8.4	(0.9)
50-59	78.0	(1.7)	15.6	(1.5)	6.4	(1.0)
60-64	64.9	(3.4)	24.1	(3.0)	11.0	(2.2)
65 and over	66.9	(3.8)	18.1	(3.1)	15.0	(2.9)
MEDICARE CASELOAD						
Low (1-15%)	70.0	(2.1)	20.4	(1.9)	9.6	(1.4)
Medium (16-50%)	72.2	(1.1)	20.0	(1.0)	7.8	(0.7)
High (over 50%)	66.9	(2.0)	25.6	(1.9)	7.5	(1.1)
FMG STATUS						
U.S. Medical Graduate	70.8	(0.9)	21.1	(0.8)	8.0	(0.6)
Foreign Medical Graduate	71.2	(3.0)	20.1	(2.7)	8.8	(1.9)
SEX						
Male	70.9	(0.9)	21.1	(0.8)	8.0	(0.5)
Female	70.5	(3.6)	20.2	(3.1)	9.3	(2.3)
BOARD CERTIFICATION						
No	69.3	(1.9)	22.5	(1.7)	8.3	(1.1)
Yes	71.4	(1.0)	20.6	(0.9)	8.0	(0.6)
EMPLOYMENT STATUS						
Employed	71.4	(2.7)	19.6	(2.4)	9.0	(1.7)
Self-Employed	69.4	(1.0)	21.4	(0.8)	9.0	(0.6)
PRACTICE SIZE						
Solo	67.1	(1.3)	21.9	(1.2)	10.8	(0.9)
Group	71.7	(1.2)	20.5	(1.1)	7.6	(0.7)

[a]Reflects physicians' billing practices for the deductible and coinsurance for assigned cases only.

Note: Billing patterns are for assigned patients only. Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

Older physicians were significantly less likely than their younger colleagues (ages 35-59) to bill the insurer, and thus, more likely to bill the patient for the deductible and coinsurance. Older physicians may not want to be bothered with the paperwork required to file a claim with the supplemental insurer and may prefer to send a bill directly to the patient.

Most of the other physician characteristics groupings did not show much variation in billing patterns. Whether a physician has a large or small Medicare caseload, is a foreign or U.S. medical school graduate, male or female, or board certified had little to do with their billing behavior or that of their practice. Slight differences, however, occur between group and solo practitioners. Group practice physicians are slightly more likely than those in solo practice to bill the insurer ($p<0.06$), suggesting that group practice physicians have more administrative support for filing third-party claims.

4.4 Physicians' Billing Practices for Patients Without Supplemental Insurance

For patients with no supplemental coverage (either Medigap or Medicaid), physicians were asked in what percent of their cases they billed for the deductible and coinsurance. Although the responses range from 0 to 100 percent, the distribution is highly skewed to the right. Thus, we have grouped the responses into three categories - always (100 percent), sometimes (1-99 percent), and never (0 percent).

Table 4-6 shows that about three-fourths (72.4 percent) of all physicians always bill for the deductible and copayment even though all physicians are expected to do so. About 10 percent never bill for the deductible and coinsurance, while 18 percent sometimes bill for the copayments. Within the "sometimes" category, physicians billed the patient for the deductible and copayment about 60 percent of the time, on average.

Billing patterns for patients without supplemental insurance vary according to specialty. Psychiatrists were least likely to bill for the deductible and coinsurance. About 42-46 percent of psychiatrists waived the

TABLE 4-6

PHYSICIAN BILLING PRACTICES FOR MEDICARE PATIENTS WITHOUT SUPPLEMENTAL INSURANCE COVERAGE, BY SPECIALTY[a]

	DEDUCTIBLE			COINSURANCE		
	Always	Sometimes	Never	Always	Sometimes	Never
ALL SPECIALTIES	***72.4% (0.9)***	***17.7% (0.7)***	***9.9% (0.6)***	***71.1% (0.9)***	***18.1% (0.8)***	***10.8% (0.6)***
General/Family Practice	71.1 (2.6)	17.1 (2.1)	11.8 (1.8)	66.7 (2.7)	18.4 (2.2)	15.0 (2.0)
Internal Medicine	72.5 (2.6)	19.9 (2.3)	7.6 (1.5)	72.7 (2.5)	20.5 (2.3)	6.8 (1.4)
Cardiology	68.2 (4.1)	25.5 (3.9)	6.3 (2.2)	65.7 (4.2)	27.3 (4.0)	7.0 (2.3)
Gastroenterology	75.1 (3.9)	18.2 (3.5)	6.7 (2.2)	73.2 (4.0)	19.2 (3.5)	7.7 (2.4)
Other Medical Specialties	80.3 (3.4)	14.6 (3.0)	5.1 (1.9)	77.8 (3.5)	15.7 (3.1)	6.6 (2.1)
General Surgery	75.3 (3.2)	17.1 (2.8)	7.6 (2.0)	73.1 (3.3)	17.6 (2.8)	9.3 (2.2)
Cardiovascular/ Thoracic Surgery	79.8 (3.4)	13.6 (2.9)	6.7 (2.1)	79.2 (3.4)	12.6 (2.8)	8.2 (2.3)
Obstetrics/Gynecology	69.9 (3.4)	17.1 (2.8)	13.1 (2.5)	67.7 (3.5)	16.4 (2.8)	15.9 (2.7)
Ophthalmology	69.0 (3.9)	26.7 (3.7)	4.3 (1.7)	66.1 (3.9)	28.7 (3.8)	5.3 (1.9)
Orthopedic Surgery	73.9 (4.0)	18.7 (3.6)	7.4 (2.4)	78.6 (3.8)	14.8 (3.3)	6.5 (2.3)
Urology	68.5 (3.7)	18.8 (3.1)	11.7 (2.6)	68.5 (3.7)	19.3 (3.2)	12.2 (2.6)
Other Surgical Specialties	70.7 (3.8)	19.9 (3.4)	9.4 (2.4)	69.5 (3.9)	19.3 (3.3)	11.2 (2.6)
Psychiatry	53.6 (4.9)	23.8 (4.2)	22.6 (4.1)	58.3 (4.9)	24.3 (4.2)	17.4 (3.7)
Anesthesiology	66.6 (3.7)	14.5 (2.8)	19.0 (3.1)	70.9 (3.6)	12.6 (2.6)	16.5 (2.9)
Radiology	83.5 (3.1)	9.9 (2.5)	6.6 (2.1)	81.2 (3.3)	9.6 (2.5)	9.2 (2.4)
Other Specialties	74.1 (3.6)	11.6 (2.6)	14.2 (2.9)	69.6 (3.8)	15.2 (3.0)	15.2 (3.0)

[a]Reflects physicians' billing practices for the deductible and coinsurance for assigned cases only.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

copayments all or some of the time. Anesthesiologists were less likely to bill for the deductible (19 percent never did so), but this may be related to the fact that the deductible is usually paid by the time the anesthesiologist typically bills the patient.

Physicians' billing practices for Medicare patients with no supplemental coverage also vary according to physician characteristics (Table 4-7). Older physicians are less inclined to bill Medicare patients for the deductible and coinsurance. Whereas 17.5 percent of older physicians never bill for the deductible, only 7 percent of the youngest physicians do so. No such trend was found for the copayment.

As would be expected physicians with medium and high Medicare caseloads (72-74 percent) were significantly more likely to always bill for the deductible and copayment than those with a low Medicare caseload (66-67 percent).

Finally, foreign medical school graduates, non-board certified physicians, self-employed physicians, and those in solo practice are slightly less inclined to bill for deductibles and copayments ($p<0.05$). There were no differences observed for men versus women physicians, urban versus rural physicians, or across regions of the country.

4.5 Areas for Further Research

The data presented in this chapter represent a first attempt to collect and analyze data on physicians' billing practices for the Medicare Part B deductible and coinsurance. The work performed to date has consisted entirely of descriptive analysis involving tests of statistical significance. This study has not involved any multivariate analysis of physician billing practices. Multivariate analysis would be desirable to determine the independent effects of specialty, geographic location, Medicare caseload, physician demographic characteristics, and community characteristics. For example, it would be desirable to disentangle specialty effects from Medicare dependence effects.

TABLE 4-7

PHYSICIAN BILLINGS PRACTICES FOR MEDICARE PATIENTS WITHOUT SUPPLEMENTAL INSURANCE COVERAGE, BY PHYSICIAN CHARACTERISTICS[a]

	DEDUCTIBLE			COINSURANCE		
	Always	Sometimes	Never	Always	Sometimes	Never
ALL PHYSICIANS	***72.4% (0.9)***	***17.7% (0.7)***	***9.9% (0.6)***	***71.1% (0.9)***	***18.1% (0.8)***	***10.8% (0.6)***
REGION						
Northeast	75.1 (1.8)	15.7 (1.5)	9.3 (1.2)	71.2 (1.9)	18.0 (1.6)	10.8 (1.3)
North Central	72.0 (1.9)	17.3 (1.6)	10.7 (1.3)	71.6 (1.9)	16.3 (1.5)	12.1 (1.4)
South	71.5 (1.5)	17.8 (1.3)	10.7 (1.0)	70.3 (1.5)	19.0 (1.3)	10.8 (1.0)
West	71.0 (1.9)	20.2 (1.7)	8.8 (1.2)	71.8 (1.9)	18.6 (1.6)	9.6 (1.2)
URBAN/RURAL LOCATION						
Rural	74.6 (1.7)	15.9 (1.4)	9.6 (1.2)	73.8 (1.7)	15.5 (1.4)	10.7 (1.2)
Urban	72.0 (1.0)	18.0 (0.9)	10.0 (0.7)	70.6 (1.0)	18.6 (0.9)	10.8 (0.7)
AGE						
34 and under	77.2 (2.5)	15.6 (2.2)	7.2 (1.5)	76.9 (2.5)	14.1 (2.1)	9.1 (1.7)
35-39	74.2 (1.9)	19.5 (1.7)	6.3 (1.0)	67.9 (2.0)	21.6 (1.8)	10.5 (1.3)
40-49	72.6 (1.5)	18.0 (1.3)	9.4 (1.0)	72.3 (1.5)	18.8 (1.3)	8.9 (1.0)
50-59	71.0 (1.9)	16.0 (1.5)	13.1 (1.4)	71.4 (1.9)	15.8 (1.5)	12.8 (1.4)
60-64	67.8 (3.3)	20.3 (2.9)	11.9 (2.3)	65.3 (3.4)	22.3 (3.0)	12.4 (2.3)
65 and over	66.1 (3.8)	16.5 (3.0)	17.5 (3.1)	71.7 (3.6)	(2.7) 12.7	15.6 (2.9)
MEDICARE CASELOAD						
Low (1-15%)	66.6 (2.2)	16.6 (1.7)	16.8 (1.7)	65.5 (2.2)	17.3 (1.8)	17.2 (1.8)
Medium (16-50%)	73.7 (1.1)	17.9 (1.0)	8.4 (0.7)	72.1 (1.1)	18.1 (1.0)	9.8 (0.8)
High (over 50%)	73.5 (1.9)	18.2 (1.6)	8.3 (1.2)	73.3 (1.9)	19.1 (1.7)	7.6 (1.1)
FMG STATUS						
U.S. Medical Graduate	73.0 (0.9)	17.6 (0.8)	9.4 (0.6)	71.9 (0.9)	18.0 (0.8)	10.1 (0.6)
Foreign Medical Graduate	65.8 (3.2)	18.9 (2.6)	15.3 (2.4)	62.7 (3.2)	19.1 (2.6)	18.3 (2.6)
SEX						
Male	72.2 (0.9)	17.8 (0.8)	10.1 (0.6)	70.8 (0.9)	18.3 (0.8)	11.0 (0.6)
Female	74.9 (3.4)	16.8 (2.9)	8.3 (2.1)	75.3 (3.4)	15.9 (2.8)	8.8 (2.2)

TABLE 4-7 (continued)

PHYSICIAN BILLINGS PRACTICES FOR MEDICARE PATIENTS WITHOUT SUPPLEMENTAL INSURANCE COVERAGE, BY PHYSICIAN CHARACTERISTICS[a]

	DEDUCTIBLE			COINSURANCE		
	Always	Sometimes	Never	Always	Sometimes	Never
BOARD CERTIFICATION						
No	66.9 (1.9)	19.0 (1.6)	14.1 (1.4)	66.2 (1.9)	20.2 (1.6)	13.6 (1.4)
Yes	74.2 (1.0)	17.3 (0.8)	8.6 (0.6)	72.7 (1.0)	17.4 (0.8)	9.9 (0.7)
EMPLOYMENT STATUS						
Employed	81.6 (2.3)	12.9 (2.0)	5.5 (1.4)	77.7 (2.5)	15.3 (2.1)	7.0 (1.5)
Self-Employed	71.1 (0.9)	18.3 (0.8)	10.5 (0.6)	70.2 (0.9)	18.5 (0.8)	11.3 (0.7)
PRACTICE SIZE						
Solo	65.7 (1.4)	19.3 (1.1)	11.7 (0.9)	64.9 (1.4)	18.3 (1.1)	12.4 (0.9)
Group	73.7 (1.2)	15.3 (1.0)	7.9 (0.7)	71.0 (1.2)	16.6 (1.0)	8.7 (0.8)

[a]Reflects physicians' billing practices for the deductible and coinsurance for assigned cases only.

Note: Standard errors are in parentheses.

Source: 1988 Physicians' Practice Costs and Income Survey.

Several questions arose as a result of this analysis that could not be answered with available data. For patients with private supplemental coverage or Medicaid, three questions could be answered through additional research:

1. **In what percent of cases do physicians actually bill the patient or the insurer?**

   The 1988 PPCIS asked physicians who they bill when they bill, rather than how often they actually bill. Thus, we do not know how frequently they waive the deductible or coinsurance for patients with supplemental coverage.

2. **Do physicians bill differently depending upon whether the patient is covered by Medicaid or a private Medigap policy?**

   Some physicians indicated that they billed the Medicaid program when the patient was also covered by Medicaid, but otherwise they billed the patient when he or she carried a private supplemental insurance policy. The 1988 PPCIS did not permit such a differentiation in billing practices.

3. **Do physicians bill differently depending upon the type or location of service?**

   Some physicians remarked that their billing practices varied according to whether the service was performed on an inpatient or outpatient service. Again, the 1988 PPCIS did not permit such a differentiation.

Two other questions pertain to physicians' billing practices for all types of patients, not just those with supplemental/Medicaid coverage.

4. **When physicians report they do not always bill the insurer or the patient for the deductible or coinsurance, what are their reasons for waiving the copayments?**

   A few physicians commented that they occasionally do not bill for the deductible or copayment because it is not worth the effort. Two reasons were given most often: (1) the paperwork is more costly than the absolute amount of the copayment (say for an office visit); or (2) patients cannot afford to pay the copayment amount (yet they are not eligible for Medicaid). Unfortunately, the verbatim comments collected by the interviewers during the 1988 PPCIS are random remarks and are not generalizable to the population as a whole.

5. **Of those cases in which the patient or insurer is billed for the deductible and coinsurance, in what percentage does the physician actually collect the copayment?**

   The 1988 PPCIS, as well as the 1988 PPRC Survey, attempted to gather information on collection rates for the deductible and coinsurance. Physicians tend to have a difficult time reporting the percent of charges collected on average (as evidenced by the relatively high item non-response rate on Q42). However, physicians might be more successful in answering the percentage of cases in which the full copayment amount was collected. This would more directly address policy concerns about collection of the copayment as opposed to billing practices.

APPENDIX A

QUESTIONS PERTAINING TO PHYSICIANS' MEDICARE PATIENTS

QUESTIONS PERTAINING TO PHYSICIANS' MEDICARE PATIENTS

MEDICARE

INTERVIEWER: SOMEONE OTHER THAN THE PHYSICIAN, SUCH AS AN OFFICE MANAGER, MAY ANSWER Q.38-Q.42.

The next few questions are about health insurance. Please tell us about revenue according to the primary payer, whether or not you collect directly from the payer. (PROBE: For (your/Dr. _____'s) patients.)

38. In 1988, about what percentage of (your/Dr. _____'s) revenues were from...

A. Uninsured patients, that is, who have no private or government insurance coverage at all for physicians' services? |__|__|__|%

B. Part B of Medicare as a primary payer? |__|__|__|%

C. The state Medicaid program as a primary payer? |__|__|__|%

D. Private Blue Shield insurance as a primary payer? |__|__|__|%

E. Other private health insurance plans as primary payers? |__|__|__|%

F. Or some other source? (SPECIFY) _____ |__|__|__|%

TOTAL |__|__|__|%

BOX 21. HEALTH INSURANCE

A. DOES TOTAL IN Q.38 = 100%?

YES..... 1 (B)
NO..... 2 (RECONCILE; THEN GO TO B)

B. WERE PERCENTAGES FOR BLUE SHIELD AND OTHER PRIVATE PLANS REPORTED COMBINED OR SEPARATELY?

COMBINED..... 1
SEPARATELY..... 2

C. ARE PERCENTAGES AT INDIVIDUAL LEVEL OR PRACTICE LEVEL?

INDIVIDUAL..... 1
PRACTICE..... 2

D. ARE THERE MEDICARE B PATIENTS (38B = 1+%)?

YES..... 1 (Q.38G)
NO..... 2 (Q.43)

G. What percentage of (your/Dr. _____'s) 1988 Medicare cases had supplemental insurance that covered the deductible and coinsurance?

|__|__|__|%

H. What percentage of (your/Dr. _____'s) 1988 Medicare cases were also covered by Medicaid?

|___|___|___|%

In 1984, Congress enacted legislation concerning Medicare and assignment of benefits. Physicians were given an opportunity to sign an agreement to accept assignment for all of their Medicare patients.

39. Did (you/Dr. _____) sign the agreement for the period beginning April 1988?

Yes..... 1

No..... 2

40. Did (you/Dr. _____) sign in January 1989?

Yes..... 1 (Box 23)

No..... 2 (Box 22)

BOX 22. PARTICIPATION '88 AND '89 DID RESPONDENT SIGN IN 1988 AND NOT SIGN IN 1989 (Q.39 = 1 AND Q.40 = 2)? YES..... 1 (A) NO..... 2 (B)

A. I've recorded that (you/Dr. _____) signed for the period beginning April, 1988, but not for the period beginning January 1989. Is that correct?

Yes..... 1 (Q.41)

No..... 2 (Reconcile)

BOX 23. PARTICIPATION '88 DID RESPONDENT SIGN IN 1988 (Q.39 = 1)? YES..... 1 (Q.41) NO..... 2 (B)

B. What percentage of (your/Dr. _____'s) 1988 Medicare cases did (you/he/she) accept on assignment? [PROBE: Where the government pays (you/Dr. _____) directly].

|___|___|___|% (IF 100%, SKIP TO Q.41)

C. For (your/Dr. _____'s) 1988 non-assigned Medicare patients, what percentage of (your/Dr. _____'s) full charge did (you/he/she) collect? (PROBE: That is, without any upfront discounts or bad debts.) (PROBE: On average.)

|___|___|___|% (IF B = 0%, SKIP TO Q.43)

41. The next few questions are about (your/Dr. _____'s) billing practices for assigned patients.

When the Medicare patient is also covered by private supplemental insurance or Medicaid, in what percentages of cases (do you/does Dr. _____):

A. bill the insurer or Medicaid directly? |___|___|___|%

B. bill the patient directly? |___|___|___|%

TOTAL = |___|___|___|% (IF LESS THAN 100%, PROBE)

COMMENT: _____

_____

When the assigned Medicare patient has no additional coverage, in what percentage of cases (do you/does Dr. _____) actually bill the patient:

C. for the deductible |___|___|___|%

D. for the coinsurance |___|___|___|%

42. For all (your/Dr. _____'s) assigned patients, what percentage of the deductible and coinsurance (do you/does Dr. _____) collect on average?

|___|___|___|%

APPENDIX B

NORC SPECIALTY CATEGORIES (16 AGGREGATE SAMPLING CATEGORIES) AND AMA SPECIALTY CATEGORY CODES (80 DETAILED CATEGORIES)

APPENDIX B

NORC specialty categories (16 aggregate sampling categories) and AMA specialty category codes (80 detailed categories)

NORC (16 aggregate sampling categories)		AMA abbre-viation	AMA specialty category* codes (80 detailed)
1.	General and family practice	GP	General practice
		FP	Family practice
2.	Internal medicine	IM	Internal medicine
3.	Cardiology	CD	Cardiovascular disease
4.	Gastroenterology	GE	Gastroenterology
5.	Other medical (including pediatrics)	A	Allergy
		AI	Allergy and immunology
		ADL	Adolescent medicine
		D	Dermatology
		DIA	Diabetes
		END	Endocrinology
		GER	Geriatrics
		HEM	Hematology
		ID	Infectious diseases
		IG	Immunology
		NEP	Nephrology
		NPM	Neonatal-perinatal medicine
		NTR	Nutrition
		ON	Oncology
		PD	Pediatrics
		PDA	Pediatric allergy
		PDC	Pediatric cardiology
		PDE	Pediatrics, endocrinology
		PHO	Pediatric hematology-oncology
		PNP	Pediatrics, nephrology
		PUD	Pulmonary diseases
		RHU	Rheumatology
6.	General surgery	ABS	Surgery, abdominal
		GS	Surgery, general
		PDS	Surgery, pediatric

* It should be noted that this classification was used for the purposes of stratification. As of 1988, the AMA makes use of 85 self-designated specialties, not 80.

APPENDIX B
(continued)

NORC (16 aggregate sampling Categories)		AMA abbre-viation	AMA specialty category codes (80 detailed)
7.	Orthopedic surgery	HS	Surgery, hand
		ORS	Surgery, orthopedic
8.	Ophthalmology	OPH	Ophthalmology
9.	Urology	U	Surgery, urological
10.	Obstetrics/ gynecology	REN	Reproductive endocrinology
		GYN	Gynecology
		OBG	Obstetrics and gynecology
		OBS	Obstetrics
		GO	Gynecological oncology
		MFM	Maternal and fetal
11.	Cardiovascular/ thoracic surgery	CDS	Surgery, cardiovascular
		TS	Surgery, thoracic
12.	Other surgery	CRS	Surgery, colon and rectal
		FPS	Surgery, facial plastic
		HNS	Surgery, head and neck
		NS	Surgery, neurological
		OTO	Otorhinolaryngology
		PS	Surgery, plastic
		TRS	Surgery, traumatic
		VS	Surgery, vascular
13.	Psychiatry	CHP	Child psychiatry
		P	Psychiatry
		PYA	Psychoanalysis
14.	Anesthesiology	AN	Anesthesiology
15.	Radiology	DR	Radiology, diagnostic
		NM	Nuclear medicine
		NR	Nuclear radiology
		PDR	Radiology, pediatric
		R	Radiology
		RO	Radiation oncology

APPENDIX B
(continued)

NORC (16 aggregate sampling categories)		AMA abbre-viation	AMA specialty category codes (80 detailed)
16.	Other specialties (including pathology)	AM	Aerospace medicine
		CHN	Child neurology
		EM	Emergency medicine
		GPM	General preventive medicine
		N	Neurology
		OM	Occupational medicine
		OS	Other specialties
		PA	Clinical pharmacology
		PH	Public health
		PM	Physical medicine and rehabilitation
		US	Unspecified
		BLP	Bloodbanking
		CLP	Pathology, clinical
		DMP	Dermatopathology
		FOP	Pathology, forensic
		NA	Neuropathology
		PTH	Pathology
		ATP	Anatomical pathology
		CCM	Critical care
		FLX	Forensic and legal

Source: Thalji, Rosenbach, Frankel, et al., 1988 Physicians' Practice Costs and Income Survey: Final Report and User's Manual, Volume 1, Chicago: NORC, 1991, Prepared Under HCFA Contract No. 500-88-0045.

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PROJECT NUMBER:   500-88-0045       TYPE:  R              STATUS:  C

P/I OR AUTHOR: Schneider, John E.   Rosenbach, Margo L.




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         Participation,

TITLE 2: Assignment, and Billing Practices

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This report examines physicians' billing practices under Medicare for the deductible, coinsurance, and balance bill. This study is based on the 1988 Physicians' Practice Costs and Income Survey (PPCIS). A total of 3,505 physicians participated with a response rate of 61 percent. Based on the PPCIS, about half of all physicians signed the Medicare Participation Agreement in April 1988 (49.5 percent). Nonparticipating physicians accepted about one-in-three cases on assignment on average. About 8 percent of participants were actually "de facto" participants in that they accepted 100 percent of their cases on assignment.

This study also examined physicians' billing practices for the deductible and coinsurance among assigned patients. When patients were covered by private supplemental insurance (Medigap) or Medicaid, physicians almost always billed the supplemental insurer or Medicaid for the copayments, rather than the patient. Only 8 percent of physicians never billed the insurer, instead of preferring to bill the patient directly.